



ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

COUNTY BOROUGH OF CARDIFF,

FOR THE YEAR 1903.

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D.P.H., Camb., FELLOW OF THE SANITARY INSTITUTE,
MEDICAL OFFICER OF HEALTH.

Printed by Order of the Sanitary Authority.

CARDIFF:
WESTERN MAIL, LIMITED.

1904.

Health and Port Sanitary Committee.

Mayor :

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CARDIFF URBAN SANITARY AUTHORITY.

Medical Officer of Health's Department.

Medical Officer of Health :

EDWARD WALFORD, M.D., D.P.H.

Chief Inspector of Nuisances :

D. VAUGHAN.

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S. EVANS.*

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F. GLOVER.*

S. JEFFERY.*

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GEO. THOMAS.*

A. F. MALE.*

Inspector of Lodging Houses :

J. W. HOLDEN.*

Inspector of Dairies, Cowsheds, and Milkshops, and under Sale of Food and Drugs Acts :

A. J. GREEN.

Inspector under Shop Hours Act, and Inspector of Workshops :

J. ASHMAN.*

Inspector of Meat and other Foods :

G. M. MCGREGOR.*

Woman Inspector :

Miss A. HOYLE.

Disinfectors at Disinfecting Station :

WM. THOMAS.

Disinfectors :

F. DAVEY.

WM. WEBSTER.

Senior Clerk :

A. R. BULLEY.

Junior Clerk :

W. JENKINS.

* Cert. of San. Inst.

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CARDIFF URBAN SANITARY AUTHORITY.

TOWN HALL,

CARDIFF,

May, 1904.

TO THE CHAIRMAN AND MEMBERS OF THE

CARDIFF URBAN SANITARY AUTHORITY.

GENTLEMEN,

I have the honour of submitting to you my Report for the year 1903, made in accordance with the Local Government Board's Order of March, 1891, which specifies the information to be contained in the Annual Reports of Medical Officers of Health.

A Memorandum, issued by the Board's Medical Officer, dated October, 1901, directs that—"the Report should be chiefly concerned with the conditions affecting health in the district and with the means of improving those conditions. It should contain an account, brought up to the end of the year under review, of the Sanitary circumstances of the district, and of any improvement or deterioration which may have occurred during the year in those circumstances. Care should be taken to report fully and explicitly on the influences affecting or threatening to affect injuriously the public health in the district, and on the action which has been taken, or which may still be needed, with a view to combat those influences. It is of especial importance that the Medical Officer of Health should record what action has been taken to remedy unhealthy conditions which have been reported by him in previous Annual Reports, or in special reports presented during the year under review, and that attention should be called afresh year by year to such as remain unremedied."

The Report will, therefore, contain information relating to the following subjects:—

- (1) Physical features, general character, meteorology and vital statistics of the district.
- (2) House accommodation, especially for the working classes: Its adequacy and fitness. Sufficiency of open space about houses, and cleanliness of surroundings.
- (3) Sewerage and drainage: Its sufficiency in all parts of the district.
- (4) Removal and disposal of house refuse.
- (5) Water supply of the district: Sufficiency, wholesomeness, and freedom from risks of pollution.
- (6) Places over which the Council have supervision, *e.g.*, Lodging-houses, Slaughter-houses, Bakehouses, Dairies, Cowsheds and Milkshops, Factories and Workshops, and offensive trades.
- (7) Nuisances: Proceedings for their abatement.
- (8) Methods of dealing with Infectious Diseases: Notification; Isolation Hospital accommodation and disinfection.

At a meeting of the Council of the County Borough of Cardiff, held in November, 1903, the following Standing Order was adopted in order to facilitate the business of the Health Committee and to ensure the speedy abatement of nuisances:—

"The Council delegate to the Health and Port Sanitary Committee (1) all the powers, duties, authorities, and discretions vested by law in or exercisable by the Council with respect to nuisances, dairies, cowsheds and milkshops, bakehouses, lodging-houses (common and seamen's), hours of assistants in shops, sale of food and drugs, prevention of pollution of rivers, canal boats, factories and workshops, scavenging and cleansing of streets, removal of refuse from houses, destructors, houses of the working classes (except the building of a common lodging-house), prevention of infectious diseases, regulation of alkali works, theatres, and music halls, and all other Sanitary matters in the Borough, and the administration of the Midwives Act, 1902 (so far as the Corporation are concerned); (2) the consideration of all reports by the Medical Officer of Health and the Public Analyst, and the making of such recommendations thereon as they may deem advisable; (3), all the powers, rights, and duties vested in the Council as the "Cardiff Port Sanitary Authority" by the Order of the Local Government Board, dated 15th September, 1894, with power (without first obtaining the approval of the Council) to cause such proceedings as they may direct to be instituted against any person or persons to enforce the provisions of the said order relating to nuisances and polluted wells, &c., infectious and epidemic diseases and hospitals; (4) also authority (without first obtaining the approval of the Council) to take all necessary proceedings for enforcing the law as to dairymen furnishing lists of customers in certain cases, and to grant or not grant licenses for seamen's lodging-houses, and direct prosecutions for breaches of the law relating thereto; (5) also full power and authority (without confirmation by the Council) to deal with all matters under the Midwives Act, 1902, and also as to infectious diseases and nuisances, to serve all official notices as may be necessary in connection therewith, and to take legal and other proceedings where necessary to enforce compliance with official notices, and as may be necessary in connection herewith; (6) to engage and direct all such officers, workmen, and servants as may be required for the purposes of this Committee; to transact all business of a general character in relation to Sanitary matters not specially referred to any Committee or Committees appointed by the Council, and to give such directions as they may think fit for the information and guidance of the Medical Officer of Health; (7) and generally do all such acts, matters, and things as may be necessary or incidental to the execution of the aforesaid powers, authorities, and discretions; provided always that, except as herein specified, all proceedings of the said Committee be subject to confirmation or otherwise by the Council aforesaid."

The general health of a district is so intimately connected with the character of the soil upon which the houses are built, that a short description of the more important physical features of this locality may not be out of place in this report. Amongst the diseases which appear to be closely associated with the composition of the soil may be mentioned Phthisis, Enteric Fever and Diarrhoea, the prevalence of which seems to bear some relation to the permeability of the ground, the variations in the level of the subsoil water, and to the nature and amount of the impurities present in the ground, air and water. The following information is derived from a memoir of the Geological Survey of England and Wales, recently issued, descriptive of the geology of the South Wales Coalfield and of the country around Cardiff. Part of the town of Cardiff is built upon alluvial land at a very slight elevation above the ordinary sea level near the mouths of three Rivers, the Rhymney, the Taff and the Ely. The Rhymney and the Ely, at the points at which they enter the Bristol Channel, forming respectively the Eastern and Western limits of the Borough. The Taff, flowing in a Southerly direction, forms a natural division of the town into East and West, each having a separate drainage system.

The older geological formations of the district include the Silurian, the Old Red Sandstone, and the Carboniferous Limestone Rocks, the more recent strata belonging to the Trias and Lias formations. The superficial deposits consists of glacial drift, alluvium estuarine mud and river gravels. A small exposure of the Wenlock and Ludlow beds of the Silurian formation is seen in the banks of the Rhymney River, close to the bridge on the Newport Road, and a more extensive one in a quarry about a quarter of a mile from the bridge. The area of the Old Red Sandstone lies to the North of the town, being exposed on the Rhymney Railway cutting near Llanishen Station. This formation is chiefly of interest from the fact that the present

magnificent water supply to the Cardiff District is derived from the Old Red Sandstone of the Brecon Beacons, the summits of which are about 3,000 feet above the sea, at a distance of 35 miles from Cardiff.

The Carboniferous Limestone which forms the basin upon which lies the South Wales Coalfields is exposed on the hills to the North of Cardiff, the only exposure actually within the town is that of the Flat Holm Island, in the parish of St. Mary. The Trias formation is represented by the Keuper or New Red Marl, which is the most prominent feature in the geology of this locality, resting on the Old Red Sandstone at Newport, the Silurian rocks at Cardiff, and the Carboniferous Limestones in the districts further West. The Rhaetic and Lias beds lie above the Keuper, being exposed to view in the Penarth Cliffs. Upon the impervious New Red Marl rest the more superficial deposits, consisting of River Gravel, apparently the product of the Taff and Rhymney Rivers, and composed of materials of the Glacial Drift bordering their valleys. The gravel is saturated with water, which in former times, with disastrous results, formed the principal source of drinking water supplied to the town.

This water, at all times subject to extensive pollution from animal organic refuse matter derived from a large urban population, was largely responsible for the high mortality from enteric fever and diarrhoea which was formerly a characteristic of the vital statistics of the town. The extensive epidemics of Asiatic cholera in the years 1837, 1854, and 1863, were also attributed to the polluted water supply from the gravel.

The Gravel Terrace on the East of the River Taff forms the building land on which a greater part of that side of the town is built, and is certainly a more suitable soil for buildings than the low-lying alluvial and estuarine mud flats in the neighbourhood of the Docks, South Splott and Grangetown.

The River Gravel continues beneath these alluvial and mud deposits which form the foreshore and land near the Docks. Its seaward margin is marked by a gentle rise in the ground from about 22 feet to 30 feet above Ordnance Datum and by a change of soil from mud to coarse gravel.

This margin can be traced by Splott to the River Rhymney and thence back by Pengam and Roath along the Pen-y-lan Road, its northern margin being in Cathays to the South of the Cemetery and Barracks. A gradual rise in the gravel takes place towards the north, so as to attain a level of nearly 40 feet above Ordnance Datum in Queen Street and the Newport Road, and 50 feet at Cathays, where it is deposited to a depth varying from 8 to 20 feet and rests on the New Red Marl. The part of the town situated on the West of the River Taff is in the Northern or Canton district, on an alluvial deposit of clay, sand and gravel, the Southern or Grangetown Ward being on the estuarine mud—a stiff blue clay of tidal origin. This low-lying part of the town is now protected from the sea and tidal waters by banks, but an exceptionally high tide has even in recent years inundated some of the lower parts of it. In some parts of the town the ground has been raised by the deposit of made soil composed of ashes and house refuse collected in scavenging operations. This has formed a convenient method of disposing of this refuse, usually a difficult matter in large towns, and an economical way of raising the level of the land. Some difference of opinion exists as to the advisability of this method of refuse disposal, having regard to the possible danger to the health of the community living in the immediate neighbourhood of the deposits. It has not been possible to show any direct injury to health even where this soil has been built upon, but it cannot be regarded as free from the danger at all times likely to arise from an extensive pollution of the ground, air and water under dwellings.

It has been found also that drain pipes laid in this soil are extremely liable to dislocation from the subsidence of the ground, and that corrosion and injury to iron and lead water pipes has been caused by the active chemical changes occurring during the decomposition of the refuse.

To the possible danger to health arising from the pollution of the ground is added therefore the real and more serious danger of contamination of the drinking water by the insucon of impurities through holes in the damaged pipes. The question of building on such soils does not at present arise, as the adoption of a recent Act of Parliament by the Sanitary Authority has removed the possibility of so doing, and by a resolution of the Authority passed some time ago it was decided to discontinue using this material in the construction of new roads. It is therefore very desirable that the arrangements now in contemplation for burning the house refuse in "Destructors" should be completed without delay.

The Municipal Borough of Cardiff originally comprised the Parishes of St. John the Baptist and St. Mary the Virgin. Under the provisions of the Cardiff Improvement Act of 1875, the Boundary of the Borough was extended so as to include the Parish of Roath and that part of the Parish of Llandaff known as Canton.

The County Borough of Cardiff comprises 6,373 acres of land and inland water exclusive of foreshore and tidal water. This area is distributed in the Registration Sub-districts as follows:—East Cardiff 481 acres, Central Cardiff 3,832, and West Cardiff 2,060 acres. The Borough is divided into Ten Municipal Wards, and contains the civil parishes of Canton, Roath, St. John and St. Mary.

Cardiff is well provided with Parks and Open Spaces forming admirable recreation grounds and breathing spaces for the inhabitants of the crowded parts of the town. Those places, which belong to the public and are under the control of the Cardiff Corporation, comprise a total area of nearly 300 acres as follows:—

					Acreage, Exclusive of Roads.		
					Ac.	R.	P.
Roath Park (part of)	..	..	..	..	100	..	0 .. 0
Victoria Park	..	..	..	..	19	..	2 .. 36
Canton Park	..	..	..	..	12	..	0 .. 0
Loudoun Square	..	..	..	..	1	..	1 .. 36
Howard Gardens	..	..	..	..	1	..	0 .. 36
Adamsdown Square	..	..	..	..	0	..	1 .. 32
Plasturton Gardens	..	..	..	..	0	..	2 .. 39
Dispenser	..	..	..	..	0	..	3 .. 23
Clare	..	..	..	..	0	..	0 .. 36½
Moorland	..	..	..	..	1	..	2 .. 5½
Grangetown	..	..	..	..	3	..	0 .. 31
Llanbleddian	..	..	..	..	0	..	0 .. 37
Ruthin	..	..	..	..	0	..	0 .. 28
Senghenydd	..	(North)	..	..	0	..	1 .. 7
"	..	(South)	..	..	0	..	0 .. 12
Windsor Esplanade Gardens	..	..	..	..	0	..	1 .. 18
Roath Village Green	..	..	..	..	0	..	0 .. 27
Roath Open Space	..	..	..	..	3	..	0 .. 0
Splott Recreation Ground	..	..	..	..	18	..	0 .. 0
Llandaff Fields	..	..	..	..	70	..	3 .. 2
Cathays Park	..	..	..	..	60	..	0 .. 0
Total	..	..	..	..	294	..	2 .. 6

In addition to the above named Open Spaces the public has, through the generosity of the owners, free access to the following Parks and Fields.

	A.	R.	P.
Sophia Gardens	41	3	0
Sir David's Field	9	0	0
Cardiff Arms Park	21	2	0

The population of the Borough, according to the Census enumeration of April 1901, amounted to 164,333 persons, being an increase of 27·5 per cent. since the Census of 1891, as compared with an increase of 55 per cent. during the ten years ending April 1891. The population in the middle of the year 1903, estimated in accordance with the methods adopted by the Registrar General, was 172,598, and the birth and mortality rates contained in this Report have been calculated on the basis of this estimate. The method adopted by the Registrar General for estimating the population of towns at the middle of each year since the last preceding Census is based on the assumption that the same rate of annual increase has continued as during the decennial period ending at the time of that Census. It is probable therefore that the annual estimates of population in Cardiff based on the Census of 1901 will be much more accurate than those immediately preceding that year, as they are calculated on the more moderate rate of increase of 27·5 per cent. The estimates of population obtained by this method are of course only approximately true, and they generally exhibit a considerable divergence from the actual truth in the years most remote from the last Census. The extent of this error in connection with the estimated population for Cardiff was considerable, and the result is shown in Table XIV. giving corrected death rates for each year during the intercensal period 1892—1900 based on the revised estimate made since the publication of the Census of 1901.

It will be seen in the note appended to the Table that the population for the middle of the year 1900 was estimated by the Registrar-General at 194,247, whereas, when the enumeration was made at the Census of April in the following year, the number only reached 164,333.

It should be mentioned that the relative position of Cardiff with respect to its mortality was not materially affected by this over-estimate of population, as similar errors occurred in the estimates in most of the large towns.

In order to check to some extent the accuracy of this estimate, a local enumeration, based on the number of inhabited houses, is made annually in June under the superintendence of the Medical Officer of Health. This number is multiplied by the average number of inmates per house, as given at the last Census, *i.e.*, 5·8.

The results of this enumeration, made in June, 1903, is given below :—

TABLE I.
ESTIMATED POPULATION—JUNE, 1903.

WARDS.	Area in Acres.	HOUSES.				POPULATION.
		Inhabited.	Vacant.	Building.	Total.	
Central	473	1,934	420	—	2,354	11,217
South	519	1,859	88	—	1,947	10,782
Cathays	369	3,454	98	50	3,602	20,033
Adamsdown	1,570	2,115	128	—	2,243	12,267
Riverside	313	3,114	119	9	3,242	18,061
Canton	449	4,061	111	25	4,197	23,553
Grangetown	1,905	3,401	153	7	3,561	19,725
Roth	766	2,678	121	9	2,808	15,532
Park	533	4,328	82	63	4,473	25,102
Spot	1,454	2,824	128	—	2,952	16,379
TOTALS	8,351	29,768	1,448	163	31,379	172,651

TABLE II.

COUNTY BOROUGH OF CARDIFF.

* DENSITY OF POPULATION DURING THE PAST TEN YEARS.

Year.				Persons per Acre.
1894	..	..	..	21.8
1895	..	..	..	22.4
1896	..	..	..	22.9
1897	..	..	..	23.5
1898	..	..	..	24.1
1899	..	..	..	24.7
1900	...	..	..	25.3
1901	..	..	..	25.9
1902	..	..	..	26.5
1903	..	..	..	27.0

* Calculated on the basis of the revised population, and on area of 6,373 acres.

CENSUS, 1901.

The Tables III.—V. taken from the Census Report of 1901, give the distribution of the population in the Municipal Wards, Civil Parishes and Registration Sub-Districts, as compared with the previous Census of 1891 :—

TABLE III.

Inhabited Houses and Population enumerated in 1891 and 1901, in the County Borough of Cardiff.

	Area in Acres. Land and Inland Water.	Inhabited Houses.		Population.		Increase or Decrease of Population between 1891 and 1901.	
		1891	1901	1891	1901	Increase.	Decrease.
County Borough of Cardiff }	6,373	20,476	27,971	128,915	164,333	35,418	—

TABLE IV.

Inhabited Houses and Population in Registration Sub-Districts enumerated in 1891 and 1901 :—

Registration Sub-Districts.	Area in Statute Acres. Land and Inland Water.	Inhabited Houses		Enumerated Population.		Increase or Decrease of Population between 1891 and 1901.	
		1891	1901	1891	1901	Increase.	Decrease.
East Cardiff ..	481	5,838	9,297	35,294	52,585	17,291	—
Central Cardiff ..	3,832	8,102	8,835	53,824	54,316	492	—
West Cardiff ..	2,060	6,536	9,843	39,797	57,432	17,635	—

TABLE V.
COUNTY BOROUGH OF CARDIFF.

CIVIL PARISHES AND WARDS.	HOUSES.				POPULATION.		
	Inhabited.	Uninhabited.		Building.	Persons.	Males.	Females.
		In Occupation.	Not in Occupation.				
Cardiff C.B. ..	27,971	1,105	1,872	157	164,333	81,605	82,728
Civil Parishes—							
Canton	7,582	121	670	22	43,256	21,215	22,041
Roath	10,789	149	451	98	61,022	30,132	30,890
St. John	5,069	384	377	23	29,704	13,872	15,832
St. Mary	4,531	451	374	14	30,351	16,386	13,965
Wards—							
Adamsdown ..	2,067	34	94	12	14,188	7,902	6,286
Canton	3,676	48	374	21	19,727	9,516	10,211
Cathays	3,280	31	210	5	18,522	9,257	9,266
Central	1,858	556	217	20	11,286	5,428	5,858
Grange town ..	3,236	34	217	2	20,584	10,272	10,312
Park	4,047	74	167	28	21,124	9,886	11,238
Riverside .. .	2,931	70	175	9	17,121	8,168	8,953
Roath	2,495	51	176	24	14,605	6,801	7,804
South	1,629	174	126	2	10,320	5,653	4,667
Splott	2,752	33	116	34	16,856	8,722	8,134

The following Table gives the Population of Cardiff at various ages in the County Borough, estimated to the middle of 1903.

TABLE VI.

AGES.	PERSONS.	MALES.	FEMALES.
All Ages	172,598	85,709	86,889
Under 1 year	4,650	2,257	2,393
1 year	4,129	2,082	2,047
2 years	4,254	2,078	2,176
3 "	4,358	2,161	2,197
4 "	4,358	2,142	2,216
Total under 5 years	21,749	10,720	11,029
5 and under 10 years	19,888	9,951	9,937
10 " 13 "	10,886	5,476	5,410
13 years	3,451	1,685	1,766
14 "	3,532	1,749	1,783
15 "	3,394	1,633	1,761
16 "	3,441	1,699	1,742
17 "	3,322	1,608	1,714
18 "	3,476	1,673	1,803
19 "	3,408	1,629	1,779
20 "	3,339	1,596	1,743
21 and under 25 years	13,743	6,431	7,312
25 " 30 "	15,796	7,783	8,013
30 " 35 "	13,769	6,960	6,809
35 " 40 "	12,276	6,276	6,000
40 " 45 "	10,025	5,289	4,736
45 " 50 "	7,736	4,060	3,676
50 " 55 "	6,249	3,204	3,045
55 " 60 "	4,554	2,307	2,247
60 " 65 "	3,471	1,698	1,773
65 " 70 "	2,337	1,061	1,276
70 " 75 "	1,504	691	813
75 " 80 "	793	345	448
80 " 85 "	334	134	200
85 years and upwards	125	51	74

TABLE VII.

MARRIAGES.—The number of Marriages registered during the year 1903 was 1,668, corresponding to a rate of 19·3 persons married per 1,000 persons living.

A return of the number of Marriages in the Borough of Cardiff during the years 1894-1903, together with the rate of persons married per 1,000 of the population, is given below :—

Year.	Number of Marriages.	Rate per 1,000 persons living.
1894	1,480	21·2
1895	1,271	17·7
1896	1,721	28·4
1897	1,687	22·4
1898	1,525	19·8
1899	1,719	21·8
1900	1,706	21·1
1901	1,641	19·8
1902	1,677	19·8
1903	1,668	19·3

BIRTHS. — During the year 1903 the Births registered in the Borough were 5,250; of these 2,604 were males and 2,646 were females.

The number corresponded to an annual birth-rate of 30·4 per 1,000 persons living, as compared with 28·4, the birth-rate in England and Wales, and with 29·7, the birth-rate in the 76 large towns for the same period.

The average annual birth-rate in Cardiff during the ten years 1893—1902 was 35·1 per 1,000. The rate in 1903 was therefore 4·7 below that average. The steady decline in the Marriage and Birth rates which has taken place throughout the country generally during the past 20 years has been shared by Cardiff, although the rate in this town is still above the average rate in the large towns.

TABLE VIII. shows the number of legitimate and illegitimate births, male and female, and the number of deaths amongst children under one year of age in each Ward and in the Union Workhouse during the year 1903 :—

WARDS,				Legitimate.		Illegitimate.		Total.		Total.	Deaths Under One Year.
				M.	F.	M.	F.	M.	F.		
Central	Ward	..	..	142	148	5	2	147	150	297	34
South	"	..	..	146	135	1	7	147	142	289	55
Cathays	"	..	..	299	306	3	4	302	310	612	64
Park	"	..	..	278	281	3	6	281	287	568	53
Adamsdown	"	..	..	178	179	3	3	181	182	363	53
Riverside	"	..	..	224	225	3	4	227	229	456	50
Canton	"	..	..	328	366	5	7	333	373	706	72
Roadh	"	..	..	224	249	3	4	227	253	480	64
Grange town	"	..	..	418	383	5	3	423	386	809	99
Splott	"	..	..	294	295	1	5	295	300	595	77
Union Workhouse	..	..	..	8	5	33	29	41	34	75	24
TOTAL				2,539	2,572	65	74	2,604	2,646	5,250	645

TABLE IX.—Annual Birth-rate in Cardiff compared with that in some of the large towns during the ten years ending 1903 :—

LARGE TOWNS.	Annual Birth-rate per 1,000 living.									
	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
London	30.1	30.5	30.2	30.0	29.5	29.4	28.6	29.0	28.5	28.5
West Ham	34.0	34.3	32.6	32.2	30.6	29.7	28.6	35.2	34.1	33.7
Croydon	25.0	25.3	25.1	25.0	25.4	25.1	24.9	26.4	26.1	26.3
Brighton	25.8	25.6	24.7	24.7	24.8	24.9	23.6	24.2	24.3	24.3
Portsmouth	27.6	27.9	27.6	26.9	26.7	26.2	25.7	27.9	27.1	27.9
Plymouth	28.8	28.7	28.8	28.5	29.7	29.8	28.4	26.8	27.0	25.5
Bristol	28.2	28.9	27.6	27.8	28.6	29.2	27.8	27.0	27.5	27.4
Swansea	32.3	33.4	30.5	29.4	28.9	27.7	26.7	30.1	31.1	32.0
Wolverhampton	34.1	35.4	34.4	35.1	35.8	35.3	33.5	31.7	31.6	30.5
Birmingham	31.7	32.4	32.6	33.3	34.0	34.3	32.7	32.1	31.8	31.8
Norwich	29.8	31.8	30.8	30.5	29.9	29.1	28.4	28.4	27.9	27.9
Leicester	31.5	30.8	30.8	30.6	29.6	29.4	28.2	29.0	29.1	27.4
Nottingham	28.6	29.7	28.9	28.9	28.9	28.9	27.7	28.4	27.8	28.3
Derby	29.3	29.1	28.0	27.1	27.4	28.1	26.9	27.8	28.0	27.0
Birkenhead	30.6	30.7	31.7	31.6	30.4	29.9	29.0	29.0	32.7	30.8
Liverpool	35.4	36.9	34.9	35.3	35.2	35.6	36.0	32.1	22.5	33.4
Bolton	31.5	32.9	31.3	32.5	30.9	29.9	34.7	27.5	27.2	27.0
Manchester	32.0	33.7	33.0	33.2	32.7	32.6	32.3	29.1	32.8	32.1
Salford	34.3	35.9	34.9	35.1	34.7	33.9	33.1	29.2	33.8	32.2
Oldham	27.2	27.5	27.2	26.1	25.3	24.8	24.1	24.6	26.1	25.6
Burnley	32.2	32.1	31.0	29.8	27.1	25.3	25.3	27.4	29.1	27.2
Blackburn	28.8	30.6	27.7	27.7	27.1	27.0	25.1	26.5	25.6	25.1
Preston	32.1	33.4	32.6	31.9	31.0	30.1	28.0	30.4	28.9	30.4
Huddersfield	20.2	21.7	20.5	23.4	22.5	23.0	22.8	22.7	24.4	23.8
Halifax	23.1	23.4	24.3	22.5	22.9	23.1	23.1	22.5	21.3	21.1
Bradford	26.7	26.1	25.5	24.6	24.0	23.4	23.1	23.1	23.0	23.3
Leeds	32.2	31.6	30.7	31.6	31.2	30.6	30.4	30.0	29.8	29.4
Sheffield	33.4	34.9	34.0	34.4	33.9	34.6	34.2	33.0	33.4	33.2
Hull	32.4	34.2	31.9	33.3	33.4	34.3	32.9	33.0	32.1	31.3
Sunderland	35.1	35.1	34.2	34.6	35.4	35.7	35.8	35.5	35.9	35.1
Gateshead	34.2	34.6	35.8	35.8	35.5	36.6	36.3	36.8	36.7	35.8
Newcastle-on-Tyne	31.0	31.2	31.1	31.3	31.7	31.4	30.4	32.1	32.6	31.1
Cardiff	36.5	37.1	38.1	35.1	35.9	33.7	35.2	31.4	31.2	30.5

DEATHS.—The deaths recorded during the year 1903 amounted to 2,496. So far as it has been possible to obtain information, this number includes the deaths of persons resident in Cardiff, and who died in Public Institutions elsewhere, but is exclusive of those brought into the district from outside and dying in Public Institutions within the Borough.

These deaths were equal to an annual death-rate of 14·4 per 1,000 persons living, as compared with 17·7 the average annual death-rate for the ten years 1893-1902. The natural increase in the population, or the excess of births over deaths, during the year amounted to 2,754.

On referring to Table XIV., which gives the vital statistics in the Borough of Cardiff for each year from 1852 to 1903 inclusive, it will be seen that the death-rate for 1903 was the lowest recorded during that period.

According to the returns of the Registrar General, the death-rate in the year 1903 for the whole of England and Wales amounted to 15·4 per 1,000; for the 76 Great Towns to 16·3; for 103 Smaller Towns the average rate amounted to 14·6; and for England and Wales, less the 179 towns, to 14·8 per 1,000. From this it will be seen that, in the year under consideration, the death-rate for Cardiff was even lower than the average rate in the small urban and rural districts of England and Wales.

According to the returns of the Registrar General, the death-rates in the 76 large towns ranged from 7·9 per 1,000 in Hornsey, 10·0 in King's Norton, 11·8 in Croydon, to 19·0 in Bootle, 19·7 in Manchester, 19·9 in Sunderland, 20·5 in Liverpool, 21·5 in Middlesborough, and 22·2 in Wigan.

In the first quarter of the year the number of deaths registered in the Borough of Cardiff at all ages and from all causes was 677; of these 361 were males and 316 females. These deaths corresponded to an annual death-rate of 15·6 per 1,000 persons living, as compared with 17·3, the average rate in the 76 large towns. Amongst these towns the death-rate for the quarter ranged from 9·1 in Hornsey, 10·0 in Handsworth, 11·2 in King's Norton, to 21·4 in Manchester, 21·5 in Liverpool, 21·6 in Hanley, and 23·6 in Wigan.

Fifty-six deaths in Cardiff were ascribed to the principal infectious diseases, giving a death-rate of 1·2 per 1,000 for the quarter. The average rate from these diseases in the 76 large towns was 1·67 per 1,000 for the same period.

The Infant mortality was equal to 120 per 1,000 births registered. The deaths from infectious diseases in Cardiff during the quarter included 1 from Small-pox, 13 from Measles, 5 from Scarlet Fever, 11 from Diphtheria, 21 from Whooping Cough, and 5 from Diarrhoea.

In the second quarter of the year the number of deaths registered was 562, being equal to an annual death-rate of 13·1 per 1,000 persons living, as compared with 15·3, the rate in the 76 large towns. Amongst these towns the rates ranged from 7·8 per 1,000 in Hornsey, 9·7 in Willesden, 10·1 in King's Norton, to 19·7 in Swansea and in Sunderland, and 22·8 in Middlesborough.

Thirty-four deaths were registered from the chief infectious diseases, corresponding to an annual death-rate of 0·8 per 1,000. The average rate from these diseases in the 76 large towns was 1·55 per 1,000, ranging from 0·2 in Bournemouth, 3·3 in Coventry and in Swansea, and 4·7 in Wigan. The infant mortality in Cardiff during the second quarter was equal to 95 deaths under one year of age per 1,000 births registered as compared with 115, the average rate in the 76 large towns.

The deaths from infectious diseases in Cardiff during the quarter included 2 from Smallpox, 2 from Measles, 7 from Scarlet Fever, 8 from Diphtheria, 7 from Whooping Cough, 3 from Enteric Fever, and 5 from Diarrhoea.

In the third quarter of the year the number of deaths registered was 505, being equal to an annual death-rate of 11·7 per 1,000, as compared with 15·1, the average rate in the 76 large towns. Amongst these towns the death rate ranged from 7·1 in Hornsey to 19·7 in Liverpool, 19·8 in Birkenhead, 20·1 in Wigan, 20·9 in Sheffield, 21·5 in Bootle, and 22·1 in Middlesbrough.

Seventy-eight deaths were registered from the principal infectious diseases, corresponding to an annual death rate of 1·8 per 1,000. The average death-rate from these diseases in the 76 large towns was 2·66 per 1,000, ranging from 0·3 in Hornsey to 4·83 in Wigan, 4·92 in Birkenhead, 6·67 in Sheffield, and 6·80 in Bootle.

The infant mortality in Cardiff during the third quarter was equal to 118 deaths under one year of age to 1,000 births registered, as compared with 159 per 1,000, the average rate in the 76 large towns. The deaths from infectious diseases in Cardiff during the third quarter included 3 from Measles, 7 from Scarlet Fever, 5 from Diphtheria, 4 from Whooping Cough, 6 from Enteric Fever, and 53 from Diarrhoea.

The deaths from diarrhoeal diseases during the quarter were equal to an annual death-rate of 1·22 per 1,000 persons living. This was the lowest rate recorded in any summer quarter since 1894, and was doubtless the result of the unusually cool and wet summer. Of the 53 deaths from these diseases 41 occurred amongst children under one year of age.

In the fourth quarter of the year the number of deaths registered from all causes was 663, corresponding to an annual death-rate of 15·3 per 1,000 as compared with 17·3 the rate in the 76 large towns. Amongst the towns the death-rate for the quarter ranged from 7·5 per 1,000 in Hornsey, 9·9 in King's-Norton, to 23·0 in York, 23·3 in Wigan, and 23·5 in Preston.

Sixty-four deaths were registered from the principal infectious diseases, being equal to an annual death-rate of 1·40 per 1,000.

The average death-rate from these diseases in the 76 large towns was 1·66 per 1,000, ranging from 0·05 in Hornsey, 0·40 in Burton-on-Trent, to 4·60 in York, 5·80 in Preston, and 6·58 in Warrington.

The infant mortality in Cardiff during the fourth quarter was equal to 161 deaths under one year to 1,000 births registered, as compared with 167 the average rate in the 76 large towns.

The deaths from the infectious diseases during the quarter included 9 from measles, 13 from scarlet fever, 5 from whooping cough, 12 from diphtheria, 6 from enteric fever, and 19 from diarrhoea.

Amongst the causes chiefly responsible for the deaths during the year 1903 the following may be mentioned, the death-rates from the several diseases being compared with the average rates in the 10 years, 1893—1902 :—

DEATH-RATES PER 1,000 PERSONS LIVING.

				1903.		1893—1902.
Heart Disease	..	..	..	1·50	..	1·07
Pneumonia	..	..	..	1·29	..	1·63
Phthisis	..	..	..	1·19	..	1·40
Bronchitis	..	..	..	0·93	..	1·35
Cancer	..	..	..	0·59	..	0·57
Diarrhoea	..	..	..	0·47	..	0·73
Diphtheria	..	..	..	0·20	..	0·51
Scarlet Fever	..	..	..	0·18	..	0·12
Measles	..	..	..	0·15	..	0·44
Typhoid Fever	..	..	..	0·08	..	0·10

On examining the statistics in the three Registration Sub-districts within the Borough, will be seen that the general death-rate in each of the localities was as follows :—

East Registration Sub-district	...	...	10.6 per 1,000.
West " "	...	..	11.1 " "
Central " "	...	...	13.4 " "

The death-rates from the principal infectious diseases in the Municipal Wards ranged from 0.5 in the Riverside Ward to 2.3 in the South Ward, as compared with 1.3 in the whole Borough. With the exception of Diarrhoea, which caused 82 deaths, Whooping Cough was the most fatal amongst these diseases, the mortality ranging from 0.4 per 1,000 in the South Ward to 0.05 in the Riverside Ward.

The following table shows the annual death-rates per 1,000 from all causes, and from certain infectious diseases during the year 1903 in Cardiff and in England and Wales respectively :

TABLE X.

	All Causes.	7 Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Deaths under 5 years per 1000 Births.
England and Wales ..	15.4	1.46	0.02	0.27	0.12	0.18	0.27	0.10	0.50	132
76 Great Towns ..	16.3	1.89	0.03	0.36	0.14	0.20	0.33	0.12	0.71	144
103 Smaller Towns ..	14.6	1.41	0.02	0.29	0.12	0.16	0.28	0.11	0.43	135
England and Wales } less the 179 Towns }	14.8	1.08	0.02	0.17	0.10	1.17	0.22	0.09	0.31	118
Cardiff	14.4	1.30	0.01	0.15	0.18	0.20	0.21	0.08	0.47	122

In comparing death-rates in different localities, it is necessary to bear in mind that the age distribution of the population in these places has a considerable influence upon the mortality. This becomes obvious when the average death-rate at the several age periods is taken into consideration. For England and Wales this rate amounts to about 60 per 1,000 amongst persons living under 5 years of age, and the mortality is still higher amongst persons over 65. Whilst therefore children under five and old persons die at a greater rate, those from the age of five up to about fifty-five die at a less rate than that represented by the general death-rate.

It follows that, other things being equal, those districts in which the proportion of young children and old persons amongst the general population is highest, will usually have the highest death-rate. The effect of the age distribution upon the death-rate may, however, be disturbed by other conditions having a still greater effect upon the mortality, and it is generally found that in large cities and towns high death-rates prevail in those districts in which there is over-crowding of persons upon a limited area, and in which, as the indirect result of this aggregation of persons, there is the greatest amount of poverty, dirt, and intemperance.

The rate of mortality amongst young children is liable to considerable fluctuations year by year, depending upon the extent to which certain diseases, which prove most fatal to children, prevail in the district, such as the ordinary infectious disorders, diseases of the respiratory system, summer diarrhoea, &c.

With a view of ascertaining the influence of age distribution and other local conditions upon the general mortality in the several districts in the town, I have in the following table

arranged the municipal wards in the order of their death-rates at all ages, and according to the percentage proportion of children under 5 years of age in the population of each ward. The calculations are based upon the Census populations of 1901, and the mortality is represented by the average death-rate for the three years, 1900-1902.

From this it will be seen that the highest rate of mortality is to be found in those wards in the most central parts of the town, which contain nearly all the oldest and most unsatisfactory class of house property, and in which the streets are narrower and the houses more crowded together than in the outlying wards, and in which nearly all the common lodging houses and the few remaining old courts and back-to-back houses are to be found, and in which generally the greatest amount of overcrowding, poverty and dirt exists. Such conditions are to be found in some parts of the Central, South and Adamsdown Wards.

With these exceptions, the rate of mortality will be found to correspond, approximately, in point of order, with the proportion of children under five years of age in the general population of each ward. Comparatively high average death-rates for the three years being found in the wards containing the greatest proportion of young children.

The effect of unfavourable surroundings and conditions upon the mortality of children is particularly noticeable in the Central Ward, in which locality the general death-rate amongst children under 5 years of age reached the highest point, notwithstanding the fact that the population of this Ward contained the smallest proportion of children under that age.

The alteration in the relative position of the Roath Ward with respect to its death-rate may be attributed to the greater incidence and fatality of Measles in that Ward during the above mentioned period.

Percentage proportion of population under 5 years of age and average death-rate in Municipal Wards in descending order. Mean of years 1900-1902 :—

TABLE XI.

					Proportion under 5 years.
1—Grangetown Ward	..	..	..	..	15·4 per cent
2—Splott	..	..	..	..	14·9 "
3—Canton	..	..	..	..	14·3 "
4—Cathays	..	..	..	..	13·3 "
5—Park	..	..	..	..	12·4 "
6—Roath	..	..	..	..	11·8 "
7—Adamsdown	..	..	..	..	11·0 "
8—Riverside	..	..	..	..	10·3 "
9—South	..	..	..	..	9·6 "
10—Central	..	..	..	..	8·7 "
Borough of Cardiff	..	..	..	..	12·6 "
					Death-Rate at all Ages.
1—Central Ward	..	..	..	..	17·8 per 1,000
2—South	..	..	..	..	17·1 "
3—Adamsdown Ward	..	..	..	..	16·3 "
4—Grangetown	..	..	..	..	15·0 "
5—Splott	..	..	..	..	14·6 "
6—Roath	..	..	..	..	14·1 "
7—Canton	..	..	..	..	13·8 "
8—Cathays	..	..	..	..	13·0 "
9—Park	..	..	..	..	12·2 "
10—Riverside	..	..	..	..	11·2 "
Borough of Cardiff	..	..	..	..	16·3 "

TABLE XII.—Annual Death-rate per 1,000 in some of the large towns in England and Wales for the 10 years 1894-1903 inclusive:—

LARGE TOWNS.	Annual Death-rate per 1,000 living.									
	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
London ...	17.8	19.8	18.6	18.2	18.7	19.8	18.8	17.6	17.7	15.7
West Ham ...	16.2	17.9	16.1	15.7	15.4	16.7	15.9	18.0	17.1	15.3
Croydon ...	13.2	14.5	14.2	13.1	13.9	15.0	14.6	12.9	14.0	11.8
Brighton ...	16.4	18.9	16.1	15.1	16.9	19.0	17.8	16.5	15.8	14.3
Portsmouth ...	15.2	17.8	16.6	16.2	16.3	19.7	17.3	17.9	16.8	14.7
Plymouth ...	18.3	20.1	19.6	19.0	19.5	21.7	20.8	17.9	17.0	16.5
Bristol ...	17.3	18.1	16.9	17.2	17.2	18.2	16.7	16.0	17.4	14.3
Swansea ...	17.0	18.3	16.8	15.8	18.6	18.1	17.1	18.6	16.1	18.6
Wolverhampton ...	20.7	24.4	20.0	22.5	21.3	21.8	22.5	16.9	16.4	15.5
Birmingham ...	18.6	20.3	20.8	21.6	20.0	20.8	21.5	20.5	18.6	17.8
Norwich ...	18.7	19.3	17.4	18.8	19.0	17.3	17.6	18.7	16.7	15.2
Leicester ...	14.7	17.2	16.7	17.7	16.9	17.7	17.4	15.9	14.9	14.2
Nottingham ...	17.2	19.0	17.5	18.8	17.7	20.0	19.1	18.5	16.9	16.9
Derby ...	15.0	16.7	15.7	16.0	16.8	16.9	17.5	15.2	13.9	13.6
Birkenhead ...	18.1	19.5	19.2	18.3	17.4	19.2	16.8	18.7	17.7	16.8
Liverpool ...	23.8	28.8	22.7	24.4	24.0	26.4	25.7	22.3	22.5	20.5
Bolton ...	18.8	24.0	20.7	22.0	19.4	19.9	19.5	18.2	16.9	17.5
Manchester ...	20.4	25.2	22.6	23.1	21.9	24.6	24.1	22.1	20.0	19.7
Salford ...	21.0	25.6	22.6	23.9	22.7	23.8	25.1	21.7	19.3	19.0
Oldham ...	18.6	22.0	20.3	19.2	17.6	20.5	19.6	19.6	19.1	18.6
Burnley ...	18.7	23.4	11.5	19.5	16.3	19.6	16.3	19.0	19.5	19.2
Blackburn ...	17.9	24.3	17.9	19.5	18.4	19.1	20.5	19.5	16.9	15.7
Preston ...	20.8	23.9	20.8	24.4	19.3	22.8	24.0	21.0	19.1	18.7
Huddersfield ...	15.8	16.9	16.5	16.4	15.9	16.2	16.8	16.7	17.8	16.7
Halifax ...	16.5	19.3	17.3	16.5	17.9	18.3	18.1	16.4	15.7	15.0
Bradford ...	17.0	19.9	16.5	17.5	17.6	18.4	16.4	16.8	15.8	16.4
Leeds ...	17.9	20.5	18.8	19.9	19.2	19.1	20.0	19.3	17.6	16.6
Sheffield ...	17.8	20.5	19.3	21.2	20.2	22.2	22.6	20.4	17.1	18.6
Hull ...	17.4	20.8	18.9	18.6	18.4	19.3	19.7	18.6	17.2	16.9
Sunderland ...	20.8	21.8	19.8	19.7	22.6	21.5	21.4	21.4	19.5	19.9
Gateshead ...	17.7	19.6	19.1	18.3	20.6	18.8	19.0	21.6	17.7	16.7
Newcastle-on-Tyne...	18.3	20.5	18.5	19.1	21.4	20.6	19.5	21.9	19.9	19.2
Cardiff ...	17.3	19.9	19.0	16.8	17.0	18.1	16.5	15.7	16.9	13.9

TABLE XIII.—Analysis of Deaths in the Municipal Borough of Cærliff in the Registration Sub-districts, and in each Ward in the Borough during the Year 1903.

[illegible]

TABLE XIV.—Gives the population of each year, the annual deaths from all causes from the seven chief zymotic diseases, and the death-rates from 1852 to 1903 inclusive, in the Borough of Cardiff:—

Year.	Population.	All Causes.			Seven Chief Zymotic Diseases.		
		No. of Deaths.	Death Rates per 1,000.	Mean of 10 years.	No. of Deaths.	Death Rates per 1,000.	Mean of 10 years.
1852	19,724	620	31.4	29.2	175	8.8	8.5
1853	21,094	644	30.5		129	6.1	
1854	22,464	925	40.1		353	15.7	
1855	23,834	641	26.9		71	2.7	
1856	25,204	772	30.6		136	5.3	
1857	26,574	883	33.2	24.2	234	8.8	4.6
1858	27,944	753	26.9		128	4.5	
1859	29,314	826	28.1		212	7.2	
1860	30,684	662	21.5		95	3.0	
1861	32,054	837	26.1		100	3.1	
1862	32,804	695	21.2	20.0	132	4.0	3.2
1863	33,552	862	25.7		268	7.0	
1864	34,300	932	27.1		250	7.3	
1865	35,048	867	24.7		161	4.5	
1866	35,796	882	24.6		192	5.3	
1867	36,544	873	23.8	21.5	116	3.1	2.3
1868	37,292	843	22.6		109	2.9	
1869	38,040	1,005	26.4		156	4.1	
1870	38,788	903	23.2		133	3.4	
1871	39,536	891	22.5		158	3.9	
1872	40,284	916	22.7	17.9	234	5.8	1.8
1873	41,032	995	24.2		103	2.5	
1874	41,780	885	21.2		154	3.6	
*1875	69,850	1,547	22.1		294	4.2	
1876	72,438	1,455	20.8		339	4.6	
1877	75,026	1,475	19.6	16.9	255	3.5	1.7
1878	77,614	1,468	18.9		197	2.5	
1879	80,202	1,428	17.6		137	1.7	
1880	82,790	1,634	19.7		306	3.7	
1881	85,378	1,556	18.2		164	1.9	
1882	88,603	1,724	19.4	15.9	293	3.3	1.5
1883	91,204	1,807	19.8		253	2.7	
1884	93,468	2,250	24.3		476	5.0	
1885	97,034	2,481	25.5		521	5.3	
1886	100,736	2,269	22.5		532	3.2	
1887	104,580	2,280	21.8	14.4	278	2.6	1.3
1888	108,570	2,212	20.3		324	2.9	
1889	112,712	2,190	19.4		248	2.1	
1890	117,012	2,469	21.1		282	2.4	
1891	130,283	2,873	22.0		272	2.0	
1892	132,895	2,560	19.2	13.7	371	2.7	1.3
1893	136,168	2,794	20.4		408	2.9	
1894	139,519	2,415	17.3		257	1.8	
1895	142,958	2,840	19.9		324	2.2	
1896	146,479	2,795	19.0		362	2.4	
1897	150,087	2,534	16.8	13.7	371	2.4	1.3
1898	153,783	2,627	17.0		396	2.5	
1899	157,414	2,858	18.1		384	2.4	
1900	161,452	2,667	16.5		402	2.4	
1901	165,308	2,653	16.0		284	1.7	
1902	168,909	2,865	16.9	13.7	459	2.6	1.3
1903	172,598	2,407	14.4		232	1.3	

* Canton and Roath taken into the Borough.

Populations and death-rates as estimated by the Registrar General previous to the Census of 1901:—

Year.	Estimated Population.	Death-rate.	Year.	Estimated Population.	Death-rate.
1892	.. 136,181	.. 18.7 per 1,000	1897	.. 170,063	.. 14.9 per 1,000
1893	.. 142,435	.. 19.6 "	1898	.. 170,770	.. 14.8 "
1894	.. 148,890	.. 16.2 "	1899	.. 185,826	.. 15.3 "
1895	.. 155,637	.. 18.2 "	1900	.. 194,247	.. 13.7 "
1896	.. 162,690	.. 16.8 "			

INFANT MORTALITY.—The rate of infant mortality as measured by the proportion of deaths of infants under one year of age to 1,000 births registered in 1903 was 122, as compared with 145 in 1902, and with 159 the average for the ten years, 1893-1902.

In the large towns the rate of infant mortality in 1903 was in the proportion of 144 per 1,000 births registered, ranging from 81 in Bournemouth, 84 in Hornsey, 93 in Burton-on-Trent, 181 in Rotherham, to 182 in Sheffield, 185 in Stockport, 186 in Middlesborough, and 217 in Burnley.

In the Registration Sub-districts of Cardiff the Infant Mortality was as follows :—

West Registration Sub-district ...	...	111	per 1,000 births registered.
East " "	...	119	" " " "
Central " "	...	131	" " " "

These rates do not include the infants who died in the Cardiff Union Workhouse, and which correspond to a proportion of 320 infants under one year of age to 1,000 births in that Institution during the year 1903.

The chief causes of deaths amongst infants were as follows :—

CAUSES OF DEATH.						Number of Deaths under 1 Year of Age.
Premature Birth ..	..	..	..	..	..	73
Pneumonia ..	..	..	..	..	..	61
Diarrhoea ..	..	..	..	..	..	61
Bronchitis ..	..	..	..	..	..	56
Phthisis and other Tubercular Diseases ..	..	..	...	..	..	33

The infant mortality throughout the country for the year 1903 was as follows :—

				Deaths under 1 Year to 1,000 Births.
England and Wales	...	...	...	132
76 Great Towns	...	...	...	144
103 Smaller Towns	...	...	...	135
Cardiff	...	...	...	122

The following Table shows the rate of Infant Mortality which has prevailed in some of the large towns in past years, from which it will be seen that this rate is comparatively low in Cardiff:

TABLE XV.

Towns.	Deaths under one year to 1,000 Births registered.									
	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
London	143	166	161	158	167	167	160	149	141	131
West Ham	138	168	165	171	170	197	189	171	149	146
Croydon	121	134	150	134	150	154	132	141	132	108
Brighton	138	164	135	142	181	173	166	161	125	114
Portsmouth	131	175	154	168	156	197	155	163	152	114
Plymouth	169	178	178	183	170	190	175	149	155	144
Bristol	150	143	142	148	164	158	133	131	131	116
Swansea	163	178	161	139	184	166	175	174	135	165
Wolverhampton	166	218	184	217	200	184	206	163	134	141
Birmingham	163	183	197	214	191	191	199	187	157	159
Norwich	164	190	164	196	192	179	178	183	167	150
Leicester	162	203	187	205	191	195	175	175	153	160
Nottingham	174	190	168	205	178	210	196	193	159	165
Derby	123	161	151	167	169	162	174	154	125	128
Birkenhead	143	174	177	162	186	186	160	181	148	156
Liverpool	179	210	173	200	184	198	186	188	163	159
Bolton	162	212	168	186	168	181	171	172	134	152
Manchester	160	203	176	194	197	206	189	199	152	169
Salford	174	231	199	220	212	209	207	204	157	167
Oldham	161	190	184	183	175	198	172	173	148	160
Burnley	170	242	170	219	195	269	205	226	177	217
Blackburn	169	236	171	207	206	189	220	193	159	157
Preston	217	248	203	263	225	255	236	216	189	161
Huddersfield	160	158	166	130	153	152	132	132	138	120
Halifax	135	158	149	139	163	159	132	127	144	122
Bradford	145	203	143	178	185	181	141	168	139	148
Leeds	155	191	169	191	182	171	183	188	159	153
Sheffield	157	197	173	197	195	194	200	201	150	182
Hull	142	205	173	178	182	175	183	175	137	162
Sunderland	167	189	158	163	202	175	169	182	147	157
Gateshead	152	186	172	173	208	177	169	197	136	159
Newcastle-on-Tyne	157	186	165	177	190	193	170	178	139	165
Cardiff	141	179	165	150	158	164	141	148	145	122

INFECTIOUS DISEASES.—The 2,496 deaths from all causes included 232 from the principal infectious diseases. The subjoined table shows the number of deaths from each of these diseases during the year 1903:—

Disease.	No. of Deaths.
Small-pox	3
Measles	27
Scarlet Fever	32
Whooping Cough	37
Diphtheria	36
Typhus Fever	1
Enteric Fever	14
Diarrhoea	82
TOTAL	232

The 232 deaths from these diseases were equivalent to an annual death-rate of 1·3 per 1,000 persons living, as compared with 2·6 the rate in the year 1902, and with 2·3 the average rate in the ten years 1892-1901.

The death-rate from these diseases averaged 1·46 in England and Wales and 1·89 in the 76 great towns during the year 1903, ranging from 0·40 in Bournemouth, 0·55 in Burton-on-Trent, 0·68 in Hornsey to 3·09 in Preston, 3·10 in Sheffield, 3·29 in Warrington, and 4·18 in Wigan.

In Cardiff the death-rate from this group of diseases in the several Registration Sub-districts was as follows :—

East Cardiff Registration Sub-District	..	0·9 per 1,000
West „ „ „	..	1·1 „
Central „ „ „	..	1·1 „

TABLE XVI.

Cases of Infectious Diseases notified in the Cardiff Urban Sanitary District since the adoption of the Infectious Disease Notification Act, 1889 :—

	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Small Pox ..	..	9	5	4	10	1	45	7	..	..	4	8	2	65
Diphtheria ..	63	67	155	462	326	229	296	512	940	628	706	724	686	431
Croup ..	9	3	9	17	17	19	10	4	20	12	8	10	15	7
Scarlet Fever ..	335	685	1,851	816	577	484	874	758	332	184	383	1,362	1,433	963
Enteric Fever	152	130	118	105	62	79	74	117	80	94	95	73	76	105
Typhus Fever ..	..	.	..	41	1	..	1	..	..	..	4	..	..	6
Erysipelas ..	45	52	95	152	135	132	134	163	133	176	106	152	169	145
Puerperal Fever	4	10	12	24	19	17	21	12	18	13	15	16	13	20
Total ..	608	956	2,245	1,621	1,147	961	1,455	1,573	1,523	1,107	1,321	2,345	2,394	1,742

MEASLES.—Twenty-seven deaths were registered from measles during the year, being equal to an annual death-rate of 0·15 per 1,000 persons living, as compared with 1·08, the rate in the year 1902, and with 0·44, the average rate in the ten years 1893-1902.

In the 76 large towns the average death-rate from measles for the year 1903 was 0·36 per 1,000.

Measles was very prevalent in the district during the year 1902, when the Infant Departments of several of the large Public Elementary Schools were closed, with a view to preventing the spread of the disease.

This procedure was attended with favourable results, and the mortality and prevalence of the disease rapidly diminished. The number of deaths from measles falling from 118 in the fourth quarter of 1902 to 13 in the first quarter of 1903, and to 2 and 3 in the second and third quarters respectively, rising again to 13 in the fourth quarter.

The mortality from measles throughout the country was as follows :—

	Death-rate.
England and Wales	0·27 per 1,000
76 Great Towns	0·36 „
103 Smaller Towns	0·29 „
Cardiff	0·15 „

SMALL-POX.—Four fatal cases of small-pox occurred in the Borough Hospital during the year. Three of these were patients removed from the district of the Urban Sanitary Authority, and one from that of the Port Sanitary Authority.

The deaths were equivalent to an annual death-rate of 0·01 per 1,000.

Sixty-five cases of small-pox were notified during the year.

Owing to the prevalence of this disease in the first and second quarters of the year a special report was presented to the Sanitary Authority, of which the following is an extract :—

REPORT OF THE MEDICAL OFFICER OF HEALTH

ON AN

OUTBREAK OF SMALL-POX IN CARDIFF DURING THE YEAR 1903.

“ Cardiff was comparatively free from small-pox during the year 1902. Only two cases came under the observation of the Medical Officer of Health : one in February, and the other in December of that year, both brought into the district by shipping. The latter case, as will presently appear, was apparently associated with some other cases of small-pox, which were discovered in the town in the early part of 1903. For convenience of description and in order to facilitate reference to the enclosed diagrams, the cases of small-pox have been arranged in groups : the individual cases in each group being in most instances obviously connected by personal infection. The groups have been numbered in order, so as to show as far as possible the sequence in point of time, and the history of the cases.

“ GROUP I. refers to a limited outbreak of small-pox which occurred in the Cardiff Union Workhouse, the result of two separate introductions of the infection into that institution.

“ The first introduction resulted in five cases discovered between the 27th February and the 5th March, three amongst the inmates of the Union Infirmary (Nos. 6, 7, and 8 on the Register), one in the person of a Medical Practitioner (No. 4), doing temporary duty at the Union Infirmary, and one, a man (No. 10), residing at the time in a Coffee Tavern in Wood Street, but who had been in the Infirmary up to the 2nd March. These five persons were probably infected by a man I. L., who was an inmate of the Workhouse from the 7th to the 9th February, and who, from subsequent information, seems to have suffered from small-pox in a very modified form. This man was, when in work, a labourer, and had tramped through some infected districts. Nos. 6, 7, 8, and 9 were removed to the Cardiff Borough Small-pox Hospital on March 2nd. No. 4 was admitted on the 27th February.

“ The second introduction of the disease into the Workhouse was also the result of tramp infection. It would appear that a Common Lodging-house in the town in Homfray Street had in some way become infected with small-pox in January, and that the following cases owed their infection directly or indirectly to this source.

“ On the 28th of January, a tramp was discovered in the street by a Relieving Officer, who, suspecting an infectious disease, brought the man to the office of the Medical Officer of Health. This man, No. 1 on the Register, who was found to be suffering from small-pox in a well-marked form, was, without delay, conveyed to the Small-pox Hospital.

“ The history obtained showed that he had slept at the Lodging-house in question on the 10th and 11th January, where he had in all probability contracted the disease ; subsequent inquiries pointed to the same source of infection in the case of another patient in a neighbouring town. On the 2nd March, during the examination of the inmates of the Workhouse, the Medical Officer discovered a man H. L. (No. 5), who was undoubtedly suffering from small-pox, and who was admitted to the institution on the 8th February, having previously resided at the Common Lodging-house in Homfray Street, where he contracted the disease ; shortly afterwards, between the 12th and the 19th March, six other cases occurred in the Ward of the Union Infirmary, occupied by H. L. (Nos. 11, 12, 14, 15, 17, and 18 on the Register). These infected persons were all removed to the Small-pox Hospital and no further cases occurred in the Workhouse in connection with this outbreak.

"GROUP II. comprises those cases of small-pox which were introduced into the port by shipping, or which owed their infection to such cases.

"Nos. 2, 3, 9, 13, and 24.—(No. 2) F. J., a sailor on board the s.s. "Dalegarth," was admitted to the "Hamadryad" Seaman's Hospital on the 16th February, and on the 18th was found to be suffering from small-pox, when he was removed to the Small-pox Hospital. On the 25th February, on the arrival of the same steamer at the entrance of the Penarth Dock from Liverpool, another member of the crew (No. 3) was found by the Medical Officer of Health to be suffering from small-pox, and was at once removed to the Hospital. On the 28th February an inmate of the "Hamadryad" Hospital (No. 9) was found to have small-pox. The patient was a passenger on board the s.s. "Saxon Briton," from Lisbon, and was admitted to the "Hamadryad" suffering from chronic heart disease. He contracted small-pox in Lisbon. On the 14th March (No. 13) a sailor residing in the Workmen's Hotel, Bute Street, was found to have small-pox, contracted, in all probability, during the period between the 21st February and the 5th March, when he was an in-patient in the "Hamadryad." He was removed to the Small-pox Hospital on the 14th March.

"On the 27th March, S. F. (No. 24), a member of the crew of the barque "Sebastian Ferreira," in the East Dock, was found to be suffering from small-pox, contracted from another member of the crew during the stay of the vessel in Oporto. He was removed to the Hospital on the 27th.

"GROUP III. relates to some cases of small-pox which occurred in the town, and which were removed to the Small-pox Hospital between the 17th March and the 6th May:—Nos. 16, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, and 40.

"A. F. (No. 16) a man living in Wells Street, was removed to the Small-pox Hospital on the 17th March. In this case the origin of infection was undiscovered. On the 22nd March three cases of small-pox (Nos. 20, 21, and 22) were notified at No. 5 Spencer Street. Two men (Nos. 21 and 22), lodgers in the house, were removed to the hospital on the 22nd (No. 20) Mrs. S. D., was convalescent, and for other reasons could not be removed.

On inquiry it was found that an unvaccinated child, aged two years, had recently suffered from an illness, supposed to be chicken-pox; this was the obvious source of infection in these three cases. There are strong grounds for believing that the child was infected from some other undetected cases in the same street, who were in their turn infected from the case which occurred in December of 1902, a sailor resident in Bruce Street, in the immediate neighbourhood of Spencer Street. Between the 20th March and the 17th April three isolated cases (Nos. 23, 29, and 31) were removed to the hospital from different parts of the town, and the source of their infection was not discovered. Between the 1st and the 8th April four cases were notified (Nos. 25, 26, 27, and 28), all probably indirectly infected from case No. 10). This is shown in the diagram. All these cases were removed to the hospital. On the 20th April a case of small-pox (No. 30) was notified in Bloom Street, Canton—a young man who was infected by his brother, who had previously suffered from an illness, which subsequently turned out to be small-pox. On the 6th May his sister (No. 40), who had refused re-vaccination was also attacked. Both were removed to the hospital.

"GROUP IV. refers to a series of cases and to a chain of events which displays in a glaring manner, extreme ignorance and carelessness in connection with the unrestricted movements of infected persons. Nos. 32, 35, 36, 37, 38, 39, 42, 43, 44, 45, 46, and 47 on the Register were cases strictly localised within a small area in the Splott Ward, who were infected with small-pox under the following circumstances:—On the 25th April a case of small-pox (No. 33) was notified in Swinton Street, the patient, T. P., a man about 50 years of age, a dock policeman, was found to be suffering from the disease in a severe confluent form. Immediately after the removal of the patient to the hospital the other members of the family were examined, three of whom, the wife, and two sons about 14 and 16 years of age, had evidently recently suffered from small-pox in a modified form, and were then convalescent. No medical man had been called in to attend these three persons, whose movements during their illness had been entirely unrestricted. One of the sons was employed at a small shop in Carlisle Street, occupied by a hairdresser, and assisted in shaving the customers, He appears to have infected, amongst others, the hairdresser (No. 39), who in his turn took no

notice of his illness, and continued his business as usual, until he was accidentally discovered on May 4th, when he was removed to the hospital, having suffered from the disease for at least a fortnight. The result of this procedure is shown in the diagram by the infection of eleven other cases, all persons who were in the habit of visiting, almost daily, this hairdresser's shop. Up to the present two other cases (Nos. 44 and 51) have been clearly traced to those infected in the shop, and in all probability the cases in Group V. owe their origin directly or indirectly to the same source of infection.

"GROUP VI. refers to some cases in the Canton Ward which came under the notice of the Medical Officer of Health in the early part of June, but in which the infection dates back to the beginning of April, and may be referred originally to the same sources as in case No. 30 in Group III.

"On visiting case No. 52, and in making inquiries in the neighbourhood in which the case occurred, namely, Mortimer Road, the Medical Officer of Health found a bootmaker living in the same street who was suffering at the time from Small-pox in a well-marked form, and in which the eruption was about eight days old. This man, who had not been attended by any medical man, and who had taken no precaution against infection, infected several persons living in the immediate neighbourhood, namely, cases No. 52, 53, 57, 58, 59, 61, 62, 63, and 64.

"He himself was infected by a lodger who had removed from Pembroke Road to his house in Mortimer Road, and the nature of whose illness was undetected, but who showed obvious signs of having recently recovered from Small-pox. The infection in this case being derived from the brother of G.T. (case No. 30), who lived in the same house in Pembroke Road.

PREVENTIVE MEASURES.

"With respect to the outbreak of Small-pox at the Union Workhouse, all the cases were removed, as soon as detected to the Cardiff Borough Small-pox Hospital. The preventive measures, such as re-vaccination, and observation of contacts and disinfection, were carried out by the Medical Officers of that Institution. The danger of infection by tramps and destitute persons was again made evident on this occasion, and it is greatly to be regretted that vaccination or re-vaccination (when necessary) should not be made a condition of admission to Workhouses and Casual Wards throughout the country.

"The other cases of Small-pox coming under the notice of the Medical Officer of Health and which occurred in the town and on board ships, were at once removed to the Small-pox Hospital. Re-vaccination was offered, and in most cases carried out, amongst those who had been in contact with infected persons, and they were kept under daily observation until a few days beyond the extreme limit of the incubation period. A certain quantity of articles most likely to retain infection was destroyed, and compensation given to the owners. With this exception, all infected articles of clothing, bedding, &c., were removed for disinfection by steam to the Borough Disinfecting Station.

"The infected premises and rooms were thoroughly cleansed and disinfected by Formalin Spray.

"Notices were sent to the Vaccination Officer of the localities and houses in which infection occurred, and in these districts large bills were posted calling the attention of the public to the necessity of securing protection by vaccination or re-vaccination, and at the same time, small hand-bills were distributed. On previous occasions the Medical Officer of Health has called attention to the difficulty of obtaining an efficient protection of the district from Small-pox, by a systematic system of re-vaccination of the general public. It is not sufficient in epidemic times to call attention by hand-bills and otherwise to the fact that "Public Vaccinators are authorised to afford re-vaccination with glycerinated calf lymph gratuitously to all persons over 10 years of age who have not previously been successfully vaccinated or re-vaccinated within a period of 10 years." Something more than an offer to vaccinate is necessary. Under the present conditions, however, it is not to be expected that Vaccination Officers and Public Vaccinators can do more than make the offer in such cases.

"In practice, it is found that this re-vaccination, especially of those who have been in recent contact with the disease, can best be effected under the direction and persuasive influence of the Officers of the Sanitary Authority, to whom the administration of the Vaccination Acts should be transferred. All the other preventive measures are in their hands, and this, which forms the most important of such measures, is at present delegated to the Authority dealing with the relief of paupers. In most cases, especially amongst the poorer and more ignorant classes, much good can be done by judicious persuasion, and, if necessary, indirect pressure applied through those employing labour, and in some cases by offering inducements. A great deal of the difficulty in such cases occurs in consequence of the not altogether unfounded suspicion that vaccination may lead to a temporary disablement from work. This and other difficulties can be most successfully surmounted by the Sanitary Authority and not by the Poor Law Authority, and in this respect it may be well to quote the circular letter of February, 1902, of Mr. W. H. Power, C.B., the Medical Officer of the Local Government Board, as it makes clear a matter upon which some misunderstanding frequently exists, namely, the best practical means of dealing with persons who have been in contact with Small-pox:—

"The Board take the present opportunity of making certain suggestions as to the action which sanitary authorities should take in order to deal effectively with the inmates of dwellings invaded by small-pox.

"The Board are advised that, under ordinary circumstances, the quarantining at their homes of inmates of such dwellings is not necessary in districts in which sanitary matters are properly administered and vaccination and re-vaccination are efficiently carried out.

"If, on a dwelling becoming invaded by small-pox, the actual patients are at once removed to hospital, the other inmates of the house are immediately re-vaccinated or vaccinated (as the case may be), and the dwelling and all articles in it that have been exposed to infection, including the clothes worn by the other inmates, are properly disinfected, there is no material advantage to be gained by keeping these other inmates at home. They are not likely to infect other people unless they themselves develop small-pox; and all that is required is to keep such persons under medical observation for a fortnight, and particularly to examine them carefully day by day towards the end of the second week from their exposure to infection, in order to ascertain whether any of them are developing small-pox. If none of them do so by the beginning of the third week from exposure, the re-vaccination (or vaccination) to which they were at once submitted on the occurrence of the first case in the invaded house, should secure them from attack of the disease.

"The Board consider that in ordinary circumstances the course of action indicated above is the correct one. Occasions, however, may arise in which additional precautions may be necessary; as, for example, when laundries are in question, or where the business or habits of the inmates of an invaded house are such as to make it difficult for proper medical observation of them to be maintained. In exceptional cases of this kind, in which a Council are advised by their medical officer of health that in the special circumstances it is essential that the inmates should remain in their own houses, the Board would be prepared to sanction a reasonable expenditure in securing such a result.

"I am directed to add that, in the opinion of the Board, it is competent to a sanitary authority who have adopted Section 15 of the Infectious Diseases (Prevention) Act, 1890 (53 and 54 Vic., c. 34), to supply necessary food to any inmate of a temporary shelter provided by them under that Section, whilst such person is residing in the shelter for the purpose of enabling his dwelling to be disinfected by the Sanitary Authority."

"In one case during the present outbreak the Medical Officer of Health advised the Sanitary Authority that the inmates of the infected house should be detained on the premises for the more efficient observation and control of the contacts. This was in case No. 13 on the Register, in which the person attacked with small-pox was an inmate of a large Workmen's Lodging-house or Hotel in Bute Street. About 120 men were lodging in the house at the time. It is only right to place on record the public spirit displayed by the Proprietors of this establishment, who voluntarily consented to offer free lodging to all the inmates, and to cease taking in fresh ones during the period of incubation and observation, i.e., upwards of a fortnight. At the same time they paid for the

re-vaccination of many of the lodgers and servants, which was carried out by a private medical practitioner. It is satisfactory to note that these measures were completely successful, and that no other case of small-pox occurred in this house.

"In all other cases the terms of the circular letter referred to have been carried out, and in addition the employers have been notified whenever any person employed by them has been attacked by Small-pox, and if such person refuse vaccination, they are advised to prevent their continuance at work until the expiration of a fortnight from the date of last contact with the case of small-pox. This has been found a valuable means of promoting re-vaccination.

"It has been frequently observed that a considerable danger of spreading small-pox occurs from those attacked with the modified form of the disease and amongst whom the constitutional and local symptoms are so slight that the nature of the illness is not recognised either by themselves or by the medical man called in to attend them. In such cases no precautions against infection are taken, and such persons go about their work as usual, after perhaps remaining at home for a day or two. This danger was manifested in a striking manner in the series of cases in Group IV., in which nearly the whole family (No. 33) was attacked with modified small-pox, which was unrecognized by any one until the father of the family, a man about 52 years of age, had the disease in a severe and unmistakable form. These modified cases usually occur amongst those in whom the protective power of vaccination has partially expired through age; sufficient power of protection remaining to prevent a severe attack, but not sufficient to confer complete immunity. For the most part such attacks occur amongst children over twelve or fourteen years of age and young adults in whom the protection conferred by the primary vaccination in infancy has become nearly worn out, rendering them liable to the modified form of the disease. The severe confluent and fatal forms of small-pox occur almost entirely either amongst the un-vaccinated or amongst vaccinated adults at an advanced age in whom the effects of the vaccination in infancy has completely worn out, and who have not been re-vaccinated.

"The character of the disease in its relation to vaccination is shown in the Tables appended to this Report.

"From these Tables it will be seen that most of the cases of small-pox occurred amongst adults who were vaccinated in infancy only and were not protected by re-vaccination. It has been shown in innumerable outbreaks throughout the country that primary vaccination in infancy protects up to the age of about 12 years, and should then be repeated. The effect therefore of compulsory vaccination in infancy has been to protect infants and young children from small-pox, amongst whom the disease is now exceedingly rare, practically occurring only amongst those who are un-vaccinated. Small-pox, which was formerly a disease of childhood like measles and whooping cough, is now (with the exception of the un-vaccinated children) a disease of adult life, and confined almost entirely to those adults who have either never been vaccinated or who have been vaccinated only in infancy. It is to be noted that not a single case occurred amongst persons who had been re-vaccinated.

"The Table also shows the futility of imperfect vaccination, as amongst the few young children attacked, there was one with a single imperfect mark of primary vaccination, which was equivalent to no vaccination at all. Vaccination by a single insertion is unfortunately sometimes practised in order to oblige sensitive parents. Such vaccination is usually an inefficient protection against small-pox.

"An instance of the selection of the un-vaccinated in the same family and household occurred in cases Nos. 19, 20, 21 and 22, members of the same household consisting in all of the father, mother, three children, and two men lodgers. The father, formerly a soldier, had been frequently re-vaccinated; a baby a year old and a boy four years old were vaccinated in infancy; one child two years old was un-vaccinated. The father and vaccinated children were the only persons in the house who escaped infection, the other adults not having been re-vaccinated since infancy. Also in case No. 59, where, amongst a family of four children aged 8, 6, 4 and 2 years respectively, all exposed to the same infection, the one attacked was the child four years old, the only one un-vaccinated, for whom an exemption order under the Vaccination Act, 1898, had been obtained, the other children escaping the infection entirely."

TABLE I.
CONDITION OF SMALL-POX PATIENTS IN HOSPITAL, AS TO VACCINATION AND CHARACTER OF DISEASE.
 From information supplied by Dr. Broad, the Medical Superintendent of Hospital.

Date of Notification.	No. on Register.	Age and Sex.	State of Vaccination.	Character of Disease.	Result.
1903.					
January 28th	1	G. R. 66 M	Vaccinated in childhood, no scars visible.	Confluent	Recovered
February 18th	3	F. J. 30 M	Vaccinated in infancy, one small mark	"	Died
" 25th	3	G. W. 40 M	Said to have been vaccinated in infancy, no mark visible	"	Recovered
" 27th	4	P. E. 32 M	Vaccinated in infancy, small mark	Discrete	"
March 2nd	5	H. L. 39 M	"	Confluent	"
" 2nd	6	E. R. 42 M	"	Discrete	"
" 2nd	7	T. T. 27 M	"	"	"
" 3rd	8	A. P. 49 M	"	"	"
February 28th	9	W. G. 57 M	"	"	"
March 7th	10	A. F. 56 M	Never vaccinated	Confluent	"
" 12th	11	J. D. 45 M	Vaccinated in infancy	"	"
" 12th	12	P. W. 33 M	Vaccinated in infancy, and re-vaccinated a week after exposure to infection	Discrete	"
" 13th	13	J. S. 29 M	Vaccinated in infancy	"	"
" 15th	14	W. L. 69 M	Vaccinated in infancy, and re-vaccinated some days after exposure to infection	Confluent	"
" 15th	15	A. R. 38 M	Vaccinated in infancy	"	"
" 17th	16	A. F. 26 M	Never vaccinated	"	"
" 18th	17	M. M. 66 M	Vaccinated in infancy	"	"
" 19th	18	T. B. 60 M	Not vaccinated in infancy, vaccinated some days after exposure to infection	"	"
" 22nd	21	C. L. 45 M	Vaccinated in infancy	"	"
" 22nd	22	S. H. 17 M	"	Discrete	"
" 23d	23	J. F. 21 M	"	"	"
" 24th	24	S. F. 22 M	"	"	"
" 27th	25	E. J. 34 F	"	"	"
April 3rd	26	J. D. 21 M	"	Confluent	Died
" 4th	27	S. B. 35 F	"	Discrete	Recovered
" 6th	27	"	"	Confluent	"
" 11th	28	A. M. 4 M	Not vaccinated	"	Under treatment

TABLE I.—continued.

Date of Notification	No. on Register.	Age and Sex.	State of Vaccination.	Character of Disease.	Result.
1903.					
April 20th	29	H. J. 2½ M	Vaccinated in infancy, one small improper mark	Discrete	Recovered
" 20th	30	G. T. 3½ M	Vaccinated in infancy	"	"
" 21st	31	L. T. 34 F	"	"	"
" 27th	32	C. L. 17 M	"	Semi-confluent	Under treatment
" 29th	33	T. P. 52 M	"	Discrete	Died
" 30th	34	E. P. 44 F	"	Confluent	Recovered
May 1st	35	J. H. 30 M	"	Confluent	"
" 2nd	36	J. B. 30 M	"	Semi-confluent	"
" 2nd	37	W. T. 39 M	"	Confluent	Under treatment
" 2nd	38	E. R. 24 M	"	Discrete	Recovered
" 3rd	39	R. S. 24 M	"	"	"
" 4th	40	J. T. 27 F	Vaccinated at 7 years of age	"	"
" 6th	41	T. M. 54 M	Vaccinated in infancy	"	"
" 11th	42	C. S. 19 M	"	Confluent	Under treatment
" 12th	43	J. K. 37 M	"	Discrete	"
" 13th	44	S. R. 13 M	"	Confluent	"
" 14th	45	A. H. 28 M	Re-vaccinated 3 days after exposure to infection	Mild Discrete	"
" 15th	46	G. T. 24 M	Vaccinated in infancy, one very poor mark	Confluent	"
" 16th	47	S. H. 36 M	"	Discrete	"
" 22nd	48	E. S. 56 F	" when 7 years old	"	"
" 23rd	49	W. P. 35 M	" in infancy	Severe confluent	"
" 26th	50	E. W. 39 F	"	Semi-confluent	"
" 27th	51	J. W. 49 M	"	"	"
" 28th	52	F. S. 12 F	"	Mild modified	"
" 30th	53	W. W. 30 F	"	Discrete	"
" 30th	54	R. S. 28 M	"	"	"
" 31st	55	E. P. 4 F	Un-vaccinated	Severe confluent	"
June 2nd	56	E. K. 24 F	Never vaccinated	"	"
" 2nd	57	L. W. 30 F	Vaccinated in infancy	"	"
" 2nd	58	W. B. 15 M	"	Discrete	"
" 2nd	59	W. M. 4 M	Un-vaccinated	Mild modified	"
" 3rd	60	H. P. 18 M	Vaccinated in infancy	Severe confluent	"
" 3rd	61	M. W. 7 F	Never vaccinated	Discrete	"
" 4th	62	E. K. 22 F	Vaccinated in infancy	Severe confluent	"
" 5th	63	T. M. 32 F	"	Discrete	"
" 5th	64	R. H. 63 M	Never vaccinated	"	"
" 7th	65	M. S. 9 F	Stated to have been vaccinated in infancy, but no scars seen	Severe confluent	"

SUMMARY OF TABLE I.

Ages.	Vaccinated in Infancy only.		Unvaccinated.		Re-vaccinated.		Stated to have been Vaccinated in Infancy. No scars visible.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0—5 ..	1	..	3	..	..	..	..	..
5—10 ..	..	..	1	..	..	..	1	..
10—15 ..	1	..	1	..	..	..	..	..
15—20 ..	5	..	..	..	..	..	..	..
20—25 ..	6	..	1	..	..	..	..	..
25—50 ..	31	3	1	..	..	..	1	..
50 years and upwards	6	1	3	..	..	..	1	..

DIPHTHERIA AND MEMBRANOUS CROUP.—Thirty-six deaths were registered as due to these diseases, giving an annual death-rate of 0·20 per 1,000 persons living, as compared with 0·51, the average rate in the ten years 1893—1902.

The mortality from diphtheria throughout the country in 1903 was as follows :—

				Death-rate per 1,000.
England and Wales	...	...	...	0·18
76 Great Towns	...	...	...	0·20
103 Smaller Towns	...	...	...	0·16

The number of cases of Diphtheria notified during the year was 438, as compared with 686 during the year 1902. The following table shows the number of notifications of cases of diphtheria and the mortality in each year since 1891 :—

TABLE XVII.

Year.	Population.	No. of Cases Notified.	No. of Deaths.	Death-rate per 1,000.	Mortality per Cent. of Cases Notified.
1891	130,283	67	16	0·21	23·8
1892	132,895	155	36	0·27	23·2
1893	136,168	462	93	0·67	20·1
1894	139,519	326	59	0·42	18·0
1895	142,548	229	46	0·32	20·0
1896	146,479	296	55	0·38	18·6
1897	150,087	512	90	0·59	17·5
1898	153,783	940	129	0·84	12·6
1899	157,414	628	61	0·38	9·7
1900	161,552	706	81	0·60	11·4
1901	165,308	724	78	0·47	10·7
1902	168,909	686	88	0·52	12·8
1903	172,598	438	36	0·20	8·2

It is satisfactory to note that the incidence of diphtheria, as represented by the number of notifications, has sensibly declined during the past two years, and that the death-rate in 1903 was the lowest recorded since 1891. The fatality or proportion of deaths from diphtheria to cases notified in Cardiff during the year 1903 was at the rate of 8·2 per cent. This was also the lowest fatality during the same period, and showed that the disease was generally of a mild type. Of the cases notified 224, or 51 per cent., were removed to the Cardiff Sanatorium for isolation and treatment.

The number of notifications in the several Registration Sub-Districts ranged from 119 in the East, 121 in the Central, to 191 in the West Sub-District.

The disease occurred chiefly amongst children, and the fatality was almost entirely confined to those under 15 years of age. The number of notifications and the rate of fatality at various age periods is given below.

	No. of Cases notified.	No. of Deaths.	Proportion of Deaths to Cases notified.
Under 1 year	12	2	16·6 per cent.
1—5 years	114	24	21·0 "
5—15 "	198	8	4·0 "
15—25 "	56	2	3·5 "
25—65 "	53	0	0·0 "
65 and upwards	0	0	0·0 "

On previous occasions, the excessive mortality from diphtheria in South Wales has been referred to. In the last published Annual Report of the Registrar General a table is furnished, showing the local incidence of diphtheria in the year 1901.

GROUP 1.

Numbers in Circle refer to Register.

Dates refer to the first appearance of symptoms.

Lodging House, Homfray Street.

1

January 26th. G. R., Tramp.
Slept at Lodging House 10th & 11th January.

20th February. H. L., Union Infirmary. Slept at Lodging House up to 8th February. Removed to S.P. Hospital 2nd March.

5

11

10th March. W. D., Union Infirmary.

12

9th March. P. W., Union Infirmary.

14

11th March. W. L., Union Infirmary.

15

11th March. A. R., Union Infirmary.

17

16th March. M. M., Union Infirmary.

18

17th March. T. B., Union Infirmary.

J. I., Inmate of Union Infirmary from 7th to 19th February. Undetected Small-pox.

4

27th February P. E., Med. Pract. Union Infirmary.

6

26th February E. R., Union Infirmary.

7

26th February T. T., Union Infirmary.

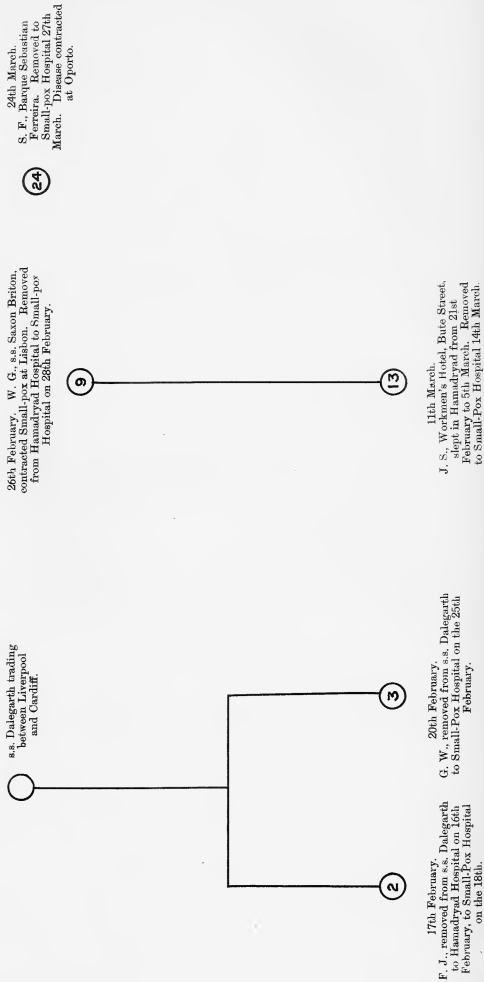
8

1st March A. P., Union Infirmary.

10

5th March A. F., I. Wood St. Union Infirmary up to 2nd March.

(CARDIFF PORT SANITARY DISTRICT.)



GROUP 3.

15

13th March.
A. L., 4, Wells Street.
Source of infection
unknown.

1st March.
5, Spencer Street, unvaccinated child, 2 years,
undetected Small-pox. Possibly contracted
disease indirectly from case in Bruce Street
December, 1902.

19

20

18th March.
S D., 5, Spencer
Street.

20th March.
C. W. L., 5,
Spencer Street.

20th March.
S. H., 5, Spencer
Street.

22

20th March.
J. P., 26,
Margaret Street.

13th April.
H. J., unvaccinated
child, 56, Wyndham
Crescent.

31

17th April.
L. T., Llantrisant
Street.

Source of infection unknown

Brother of G. J., Undetected
case of Small-Pox.

30

16th April.
G. J., 7, Bloom Street.
Removed to Hospital
20th April

40

6th May
E. T., 7, Bloom Street.
Sister of G. J.

Doubtful origin. Probably
indirectly I, Wood Street.

1st April.
H. J., 35, Adam
Street.

1st April.
S. P., 24, Milton
Street, formerly of
35, Adam Street.

1st April.
J. D., 35, Court
Road.

8th April.
A. M., 25, Haver-
lock Street.

28

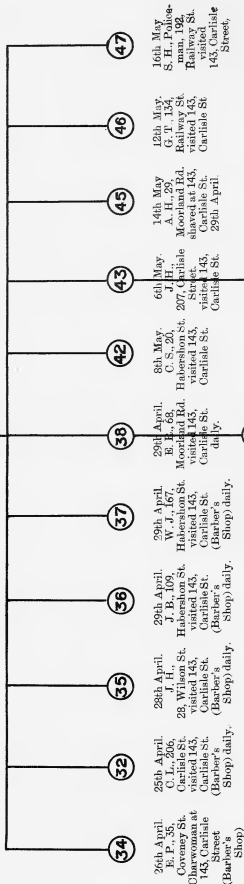
GROUP 4.

R. P., son of T. P. Undetected Small-Pox Working at 143, Carlisle Street.

11th April
R. S., 143, Carlisle Street, Barber.
Undetected until May 4th. Removed to hospital.

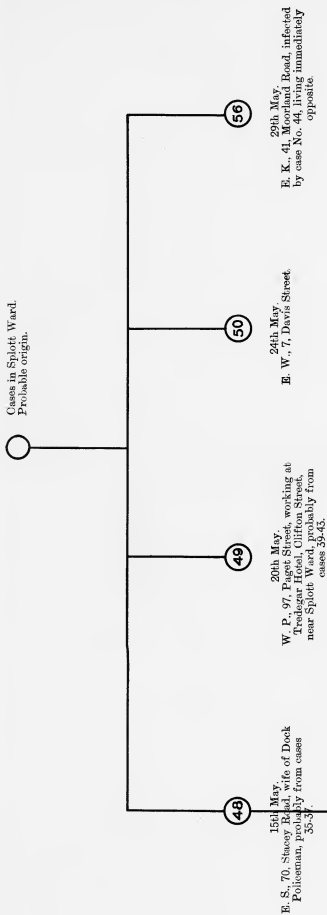
25th April
T. P., 13, Swinton Street.
Several undetected cases in this house. Wife and children of T. P.

33



GROUP 5.

Cases in Splott Ward.
Probable origin.



29th May.
E. P., 70, Stacey Road.

3rd June.
H. P., 110, Habershon Street, visited
case 48 frequently.

GROUP 6.

54

21st May.

R. S., 48, Mortimer Road.

A convalescent case of unrecognised Small-Pox in this house. First case infected from 37, Pembroke Road, in which an unrecognised case occurred early in April.

52

F. S., 3, Fern Street,
probably infected by case
No. 54.

53

26th May.
W. W., 46, Mortimer Road,
infected by case No. 54.

57

28th May.
L. W., 46, Mortimer Road,
infected by case No. 54.

58

1st June.
W. B., 32, Ghunga Street,
probably infected by case
No. 54.

59

1st June.
W. M., 50, Mortimer Road,
infected by case No. 54.

61

1st June.
M. W.,
201, Severn
Road.

62

2nd June.
E. K., 7, Mortimer
Plaster-
ton
Avenue.

63

2nd June.
T. M.,
Post
Office,
Mortimer
Road.

64

2nd June.
R. H., 5,
Pont-
canna
Place.

Arranged in decreasing order of mortality, the following counties suffered most severely :— South Wales, where the mortality, at all ages, was equal to a rate of 635 per million living; Monmouthshire, 610; Leicestershire, 517; Essex and Staffordshire, 466; Lancashire, 358; Sussex, 343; Buckinghamshire, 341; the West Riding of Yorkshire, 339; and Middlesex, 326. In four of these counties, namely, South Wales, Leicestershire, Essex and Staffordshire, the death rates from diphtheria were above the average in each of the previous five years. Taking the five year period, 1896-1900, South Wales showed the highest mortality from diphtheria of any of the Registration Counties, the average rate for that period being 626 per million, as compared with 277, the average rate in England and Wales (less London).

SCARLET FEVER.—Thirty-two deaths were registered from scarlet fever during the year 1903. This number was equal to an annual death-rate of 0·18 per 1,000 of the population, as compared with 0·12, the average rate in the ten years 1893-1902.

The mortality from scarlet fever throughout the country was as follows :—

	Death-rate.					
England and Wales	0·12	per	1,000			
76 Great Towns	0·14		„			
103 Smaller Towns	0·12		„			
Cardiff	0·18		„			

The number of cases of scarlet fever notified during the year was 963. The number of such cases notified in each year since the Infectious Disease Notification Act came into force is shown in the following table, which shows also the attack rate, or proportion of cases notified per 1,000 persons living and the death-rate per 1,000, and the percentage proportion of deaths to cases notified.

TABLE XVIII.

Year.	Population.	No. of Cases Notified.	Attack rate per 1,000.	No. of Deaths.	Death rate per 1,000.	Percentage Removed to Hospital.	Mortality per cent. of Cases Notified.
1891 ..	130,283	685	5·25	35	0·27	—	5·0
1892 ..	132,895	1,851	13·17	87	0·65	13	4·7
1893 ...	136,168	816	6·00	39	0·28	22	4·7
1894 ...	139,519	577	4·13	8	0·05	31	1·3
1895 ...	142,958	484	3·38	8	0·05	43	1·6
1896 ..	146,479	874	5·96	28	0·19	48	3·2
1897 ..	150,087	758	5·05	17	0·11	50	2·2
1898 ..	153,783	332	2·15	8	0·05	56	2·4
1899 ..	157,414	184	1·16	3	0·01	66	1·6
1900 ..	161,452	383	2·37	11	0·06	65	2·8
1901 ..	165,308	1,362	8·23	29	0·17	47	2·1
1902 ..	168,909	1,433	8·42	36	0·21	48	2·1
1903 ..	172,598	963	5·57	32	0·18	63	3·3

The local incidence of scarlet fever in each quarter of the year, as shown by the notifications in the Registration Sub-districts, was as follows :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
West Cardiff	81	105	79	70	335
Central Cardiff	73	97	94	186	450
East Cardiff	40	46	33	59	178
Total	194	248	206	315	963

The proportion of deaths from scarlet fever to cases notified amounted to 3·3 per cent., and of the 963 cases 610 or 63 per cent. were removed to the Hospital for Infectious Diseases.

A large number of Certificates for exclusion from School Attendance were granted, both with respect of children infected with scarlet fever and of those who had been in contact with infected persons. The total number of notices for exclusion from the Public Elementary Schools amounted to 1,150 during the year distributed as follows :—

Name of School.	No. of Notices sent to Schools.
Crwys Road Board School	143
Gladstone Board School	124
Radnor Road Board School	96
Severn Road Board School	88
Albany Road Board School	47
Roth Park Board School	46
Grungetown Board School	43
Lansdowne Road Board School	42
St. David's Roman Catholic School	33
Higher Grade School	31
South Church Street Board School	30
St. Andrew's National School	29
Court Road Board School	27
Moorland Road Board School	27
Wood Street Board School	25
Virgil Street Board School	24
St. Monica National School	24
Splott Road Board School	23
Adamsdown Board School	22
St. James' National School	22
St. John's (Canton) National School	21
St. Paul's Roman Catholic School	18
Eleonor Street Board School	17
St. Mary's Mission National School	16
St. Peter's Roman Catholic School	15
Marlborough Road Board School	14
Stacey Road Board School	12
Mount Stuart Square National School	11
Bute Terrace National School	10
St. Alban's Catholic School	10
St. German's National School	9
Grungetown National School	7
Maindy Board School	7
St. John's (Queen Street) National School	7
St. Patrick's Roman Catholic School	6
Intermediate Schools	5
St. Dyfrig National School	5
St. Cutbert's Roman Catholic School	5
Croft Street National School	4
St. Mary's Roman Catholic School	4
Ely Board School	1
	<hr/> 1,150 <hr/>

As in certain quarters doubts have been expressed as to the advisability of isolating cases of Scarlet Fever in hospital, it may be as well to call attention to the enclosed Tables, showing the incidence and fatality of this disease in several years, during which this form of isolation has been carried out in Cardiff in varying degrees of completeness. Bearing in mind the fact that it is obviously impossible to show by statistical methods the full value to the community of an isolation hospital, as for the present, at any rate, owing to the short period under consideration and the insufficiency of the observations, no sufficiently reliable data are available for the purpose.

A reference to the Chart in the Appendix to this Report will show the extent to which the Scarlet Fever mortality has declined during past years, and taking periods of ten years and comparing the average mortality in these periods, we find that in Cardiff the average death-rate from this disease during the ten years (1881-90) was 0·41, as compared with 0·17, the average rate in

1891-1900. In the large towns of England and Wales the average rate was 0·41 in the earlier period, as compared with 0·17 in the later period, whilst in England and Wales generally the mortality from Scarlet Fever was in 1870 at the rate of 1,446 per million, as compared with 119 per million in the year 1900. That Scarlet Fever has diminished to the extent it has is, I think, much to the credit of the administrative methods generally enforced throughout the country.

In large towns we find the density of the populations increasing year by year, and particularly in those districts which are already too densely populated. The number of large Public Elementary Schools is on the increase everywhere, causing increased aggregation amongst that part of the population most susceptible to infection. So long as the opportunities for personal infection continue to increase in these towns, it seems unlikely that the removal to hospital of some 50 per cent. of the cases notified will sensibly diminish the prevalence of the disease. That the removal of centres of infection from crowded localities must have a reducing effect upon the incidence of an infectious disease in such localities is, I think, unquestionable, although we may not be able to estimate this effect with mathematical precision. Even in the absence of any clear and definite proof of the benefits of this preventive measure, common sense would seem to suggest this method of dealing with the disease. It is of course impossible to separate the influence of hospital isolation from that of other important and powerful factors in the decline of Scarlet Fever, hence the unreliability of statistics bearing upon this point, and the uselessness of comparing the statistics of one town with another, or of one group of towns with another group.

The social condition, age, distribution of the population and other opportunities for personal infection differ among such towns to an extent which makes comparative statistics in such cases of little value.

A better method, and one not open to so many objections, is to compare the statistics of one town in different periods during which the amount of hospital isolation varied, or was not practised at all.

It may, perhaps, be especially useful to compare the height of the epidemic wave in years when there was no hospital isolation with the height when this form of isolation was freely resorted to. It so happens that in Cardiff two distinct epidemic waves of Scarlet Fever occurred since the Infectious Disease Notification Act was adopted. In the year 1892 there was an extensive epidemic in which 87 deaths occurred, and in which 1,851 cases were notified, the largest number on record.

The proportion of cases notified or the attack rate per 1,000 of the population amounted to 13·17, and the number of cases removed to the hospital was quite insignificant, being no more than 13 per cent. of the cases notified. The next epidemic occurred in the year 1902, when the population was of course much larger, and when we should therefore expect to find the actual number of persons attacked larger. In this year, however, the number of cases notified was 1,433, as compared with 1,851 in 1892, and the number of deaths 36 as compared with 87. The attack rate was therefore 8·4 per 1,000 of the population in 1902, when nearly 50 per cent. of the cases notified were removed to hospital, as compared with 13 per 1,000 in 1892, when only 13 per cent. were removed. Thus we have, since Compulsory Notification of Infectious Disease has been in force, two epidemics in Cardiff, in the earlier one (1892) with a very small percentage of removals to hospital, the attack rate was 13 per 1,000, whilst in the later epidemic of 1902, with a much higher percentage of removals, the attack rate was reduced to 8·4 per 1,000. As we have no record of the number of cases of Scarlet Fever before the adoption of the Notification Act, it is not of course possible to estimate the attack rate in the usual way, but the number may be arrived at approximately from the number of deaths registered as due to the particular disease, it may be interesting therefore to glance back at the next preceding epidemic, that of 1892, and to a period remote from hospital isolation in any degree.

A severe epidemic of Scarlet Fever occurred in Cardiff in 1884, causing 128 deaths and a death rate of 1·36 per 1,000. Assuming that the proportion of deaths to cases was the same as in the epidemic of 1892, *i.e.* 4·7 per cent. (the highest on record), there would have been 2,723 cases in the town in 1884 amongst a population of 93,468, giving an attack rate of 28 per 1,000, a rate that has never been exceeded. Of course, if the fatality was lower than 4·7 per cent., the number of cases must have been more than 2,723 and the attack rate higher than 28 per 1,000.

We have these three epidemics as follows:—

Year.	Isolated in Hospital.		Attack Rate.		Death Rate.	
1884 ..	0·0	per cent.	..	28 per 1,000	..	1·36 per 1,000
1892 ..	13	„	..	13 „	..	0·65 „
1902 ..	48	„	..	8 „	..	0·21 „

If we take a period of ten years (1890-1899) and divide this into two periods of five years each, comparing the results of isolation in each period, a very similar result is obtained. During the earlier period (1890-1894), an average of 16 per cent. of cases were removed to hospital and during the later period (1895-99) 50 per cent. were removed, as follows:—

Year.	Isolated in Hospital.		Attack Rate.		Death Rate.	
1890-94 ..	16·0	per cent.	..	6·1 per 1,000	..	0·28 per 1,000
1895-99 ..	50·3	„	..	3·5 „	..	0·08 „

We have thus, as far as Cardiff is concerned, some statistical evidence of the advantages of hospital isolation.

The benefits of this system to the community may be shown, however, in other ways. For example, in educational matters it is of the utmost importance that the school attendance in a district be interfered with as little as possible. The removal to hospital of the first cases of scarlet fever in a household will prevent the necessity of keeping other members of the family, not attacked with the disease, away from school, whereas, if the cases were not removed, a prolonged period of absence would be required, and a very considerable interruption to the education of children in the affected district would occur. Further, there are certain trades to which special legislation applies, such as milk sellers, tailors and trade connected with the manufacture or sale of wearing apparel, laundries, &c., which might be brought to a complete standstill unless the infection were removed from the premises.

ENTERIC FEVER.—Fourteen deaths were registered from Enteric Fever, as compared with nine in 1902.

The deaths were equal to an annual death-rate of 0·08 per 1,000 persons living.

The average annual death-rate from Enteric Fever in Cardiff during the ten years, 1893-1902, was 0·10 per 1,000.

The mortality from this disease throughout the country during the year 1903 was as follows:—

				Death-rate.
England and Wales ...	...	...	...	0·10 per 1,000.
76 Great Towns ...	...	...	...	0·12 „ „
103 Smaller Towns ...	...	...	...	0·11 „ „
Cardiff ...	...	...	...	0·08 „ „

One hundred cases of Enteric Fever were notified during the year; of these 76 were removed for treatment and isolation to the Hospital for Infectious Diseases, and 22 had their origin outside the district.

The notifications were distributed in each quarter of the year as follows:—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
12	17	42	29

The number of cases of Enteric Fever notified during the 3rd Quarter of the year was above the average, being 42, as compared with 27, the average number notified in the corresponding quarters of the five preceding years. This disease was unusually present in other parts of South Wales during the year, and on several occasions the infection was introduced into the town from these districts.

The sanitary condition of the houses in which cases of Enteric Fever occurred was ascertained in each case, and defects were found in 30 of these houses. These were remedied without delay.

DIARRHŒA.—The deaths from diarrhœa, including those from epidemic enteritis, numbered 82, being equal to an annual death-rate of 0·47 per 1,000 persons living, as compared with 0·32 in the year 1902. The average death-rate from diarrhœa in the ten years 1893-1902 was 0·73 per 1,000.

Throughout the country, in the year 1903, the diarrhœa mortality was as follows :—

					Death-rate per 1,000.
England and Wales	..	..	..	..	0·50
76 Great Towns	..	..	..	..	0·71
103 Smaller Towns	..	..	..	..	0·43
Cardiff	..	..	..	..	0·47

The distribution of fatal diarrhœa in Cardiff according to the season of the year, and the various age periods, was as follows :—

	Under one Year.	One and under Five Years.	Five and under Fifteen Years.	Fifteen and under Twenty-five Years.	Twenty-five and under Sixty-five.	Sixty-five years and upwards.	Total.
1st Quarter	5	—	—	—	—	—	5
2nd Quarter	2	1	—	—	1	1	5
3rd Quarter	41	4	—	1	4	3	53
4th Quarter	13	6	—	—	—	—	19
Year 1903	61	11	—	1	5	4	82

From the preceding table it will be seen that of the 82 deaths from diarrhœa during the year 53 occurred in the 3rd quarter of the year ; of these 41 were amongst infants under one year of age.

The relation between the temperature of the air, rainfall, and the diarrhoea mortality during the third quarters of the years 1892—1903, is shown in the following table:—

TABLE XIX.

Diarrhoeal Mortality in the 3rd Quarters of the years 1892—1903.

Year.		Death-rate per 1,000.		Mean Temperature.		Rainfall in inches.
1892	..	2.3	..	60°4	..	12.4
1893	..	2.5	..	61°0	..	8.9
1894	..	0.5	..	57°0	..	10.9
1895	..	2.5	..	59°5	..	9.9
1896	..	2.4	..	58°9	..	11.3
1897	..	2.6	..	59°3	..	14.3
1898	..	2.6	..	60°3	..	5.8
1899	..	3.2	..	63°3	..	5.3
1900	..	1.2	..	59°7	..	6.0
1901	..	1.4	..	60°2	..	11.1
1902	..	0.8	..	57°5	..	9.5
1903	..	1.2	..	56°9	..	13.1

From the above it will be seen that a high diarrhoeal death-rate is invariably associated with a comparatively hot and dry summer, and a low death-rate with a cool and wet summer. This relation is also shown in the Chart in the Appendix.

With a view of reducing the infantile mortality in the district, which is largely associated with diarrhoeal diseases occurring in the summer months, the Woman Inspector is employed in giving instruction in the poorer districts in Infant Feeding.

This work has occupied a good deal of her time during the summer, when the infant mortality is at its highest.

In the districts visited she had instructions to make enquiries into the nature of the food supplied to the infants who died from Diarrhoea during the third quarter of the year. The results of these enquiries are given below.

Nature of Food.				Under 3 Months.	3—6 Months.	6—12 Months.	Total.
Condensed Milk and other Food	..	..	..	4	6	6	16
Condensed Milk	..	..	..	1	1	3	5
Cow's Milk and other Food	..	..	..	..	4	2	6
Cow's Milk	..	..	..	2	2	..	4
Breast Fed and other Food	..	..	..	..	2	2	4
Breast Fed	..	..	..	1	..	..	1
Total	..	..	..	8	15	13	36

When directed, she visits the house in which the birth has occurred and leaves a printed pamphlet of instructions on Infant feeding, drawn up by the Medical Officer of Health, and at the same time gives any necessary verbal advice. The houses selected are those in which the poorer classes live and in which such assistance is likely to be useful and appreciated. In this way it is

hoped also to obtain a record of the method of infant feeding adopted throughout the district and the extent of its influence upon infant mortality. The following table shows the number of visits made, and the results of the inquiries during the year 1903:—

Result of Inquiries into the Nature of Food of 314 Infants, visited within Two Months of Birth.				
Breast Fed	..	..	..	154
Breast Fed and other Food	..	..	..	57
Breast Fed and Condensed Milk	..	..	..	9
Condensed Milk	..	..	..	43
Condensed Milk and other Food	..	..	..	37
Cow's Milk and other Food	..	..	..	10
Cow's Milk only	..	..	..	4
Total	..	..	..	<u>314</u>

The bacteriological aspects of the feeding question were inquired into, and various specimens of food and of excreta from infants were submitted to Dr. Schölberg, for examination at the Public Health Laboratory.

It is probable that the results obtained in these examinations may eventually throw light upon the various causes contributing to the infant mortality in the town, and be useful for administrative purposes.

TUBERCULOSIS.—The deaths from all forms of Tuberculosis during the year 1903 amounted to 310, including 217 from Pulmonary Consumption, or Phthisis.

The mortality from Phthisis was equal to an annual death-rate of 1·19 per 1,000, the highest rate of any single disease during the year.

During the ten years 1893-1902 the average death-rate from Phthisis amounted to 1·40 per 1,000. The mortality from Phthisis in Cardiff since the year 1880 is shown in the following table:—

TABLE XX.

Year.	Death-rate per 1,000.	Year	Death-rate per 1,000.
1880	3·21	1892	1·82
1881	2·96	1893	1·68
1882	2·86	1894	1·62
1883	2·67	1895	1·67
1884	2·97	1896	1·38
1885	3·58	1897	1·99
1886	2·78	1898	1·32
1887	2·72	1899	1·32
1888	2·80	1900	1·25
1889	2·79	1901	1·05
1890	3·18	1902	1·29
1891	2·78	1903	1·19

An account of the measures carried out within the Borough, with a view of preventing the spread of Consumption, was given in the Annual Report for 1902. During the year under consideration these measures have been continued and their scope extended.

In March, 1903, a Woman Inspector, Miss A. Hoyle, was appointed by the Sanitary Authority, whose duty it is to visit all cases of Phthisis notified to the Medical Officer of Health, and to report to him on a printed form the circumstances connected with each case.

The system of voluntary notification of cases of phthisis has been in operation during the past two years, and on the whole has been a success, and much good work has been effected by it. Each case notified is visited in the first instance by the Woman Inspector, and subsequently, when

necessary, by the Medical Officer of Health. The consumptives and their families are instructed personally and by pamphlets in the precautions necessary for the spread of infection, and at the request, or with the consent of the medical man attending the case, some of the patient's sputum is taken to the Public Health Laboratory for the purpose of diagnosis. At the same time an enquiry is made into the sanitary condition of the premises, and any defects found are remedied without delay.

In the event of a death from phthisis being registered, a post card is sent to the occupier of the dwelling in which the death occurred, offering disinfection of the premises and infected articles free of charge.

Under the provisions of the Tramway Act, 1870, a Bye-law has been made, and came into force during the year 1903, prohibiting, under a penalty, spitting in or on any car.

The beneficial effect of this Bye-law is sufficiently obvious to passengers in the new Electric Tramways belonging to the Corporation.

A Bye-law has also been framed under the Municipal Corporations Act, 1882, prohibiting spitting on the floor, side, or wall of any public carriage, or of any public hall, public waiting room, or place of public entertainment. This Bye-law has not yet received the approval of the Home Secretary.

During the year 163 cases of Phthisis were notified to the Medical Officer of Health, as compared with 109 in the year 1902. Of these, 86 were males and 77 females.

Of the males, 28 were inmates of the Union Infirmary, and four were in receipt of outdoor parish relief. Of the females, 15 were patients at the same Infirmary, and six were in receipt of out-door relief.

The following table shows the occupation of the patients as stated at the time of visit :—

The Occupation of each Patient.—Males.

Holy Orders ..	1	Messenger Boys ..	2	Bottler ..	1
No Occupation ..	28	Coal Trimmers ..	3	Carmen ..	3
Dock Labourers ..	7	Hairdresser's Assistant ..	1	Attendant ..	1
Farm ..	1	Ship's Carpenter ..	1	Stableman ..	1
Mason ..	1	Late Seaman, Royal Navy ..	1	Telegraph Wireman ..	1
Corporation Labourers ..	2	Stamp Sorter, G.P.O. ..	1	Lodging House Keeper ..	1
Stonemasons ..	2	Clerk ..	1	Publican ..	1
Master Mariner ..	1	Iron Moulder ..	1	Electrician ..	1
Wheelwright ..	1	Boot and Shoe Makers ..	2	Tailor ..	1
Not Stated ..	7	House Painters ..	2	Pilot ..	1
Miner ..	1	Newspaper Boys ..	2		
Scholars ..	4	Wireman ..	1		

The Occupation of the Females.

Housewives ..	34	Hawkers ..	3	Potato Picker ..	1
No Occupation ..	15	Machine Knitter ..	1	Seamstresses ..	2
Not Stated ..	10	Dressmaker ..	1	Charwomen ..	2
Domestic Servants ..	2	Laundresses ..	2		
Scholars ..	3	Housekeeper ..	1		

In some cases it was possible to discover the probable source of infection. This will be seen in the following table :—

REFERENCE NUMBERS IN REGISTER.

No.		No.	
9	Sister and Son suffering at present	77	Sister died from Phthisis
11	Father and Sister died from Phthisis	83	Brother ..
21	Husband died	92	Husband and 2 Children died from Phthisis
33	Three members of the family died	93	Brothers and Sisters died from Phthisis
44	Brother died from Phthisis	105	Husband suffering at present from Phthisis
46	Mother ..	112	Sisters died from Phthisis
48	Mother ..	119	Sisters ..
56	Brothers and Sisters died from Phthisis	121	Sister and Nephew died from Phthisis
65	Mother, Brother and Sisters died from Phthisis		

CENTRAL WARD.

TABLE XXI.—The following Tables show the distribution of mortality from the chief zymotic diseases, from phthisis, from diseases of the respiratory organs, and from other causes, in each street in the Borough, during the year 1903 :—

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Bridge Street and Little Bridge Street	1	..	..	2	..	3	6
Blackweir and Terrace	1	..	2	4
Bute Street and Terrace	1	..	1	..	1	3	6
Canal Street	1	..	..	1
Caroline Street	1	..	..	1
Colum Road and Place	11	11
Church Street	1	1
Charles Street	1	1
Duke Street	1	..	1
David Street	1	2	2	5
Dumfries Place	1	..	..	..	1	2
Eisteddfod Street	4	2	6
East Terrace	1	2	2	5
Edwards Street, Terrace, and Place	6	6
Frederick Street	2	1	8	11
French Cottages	1	..	1
G.W. Railway Station	1	1
Gough Street	1	..	..	2	3
Guildford Street and Crescent	1	1
Havelock Street	7	7
Homfray Street	1	..	..	1
Hill's Terrace and Street	1	7	8
High Street	1	1
Love Lane	1	..	1	2
Little Frederick Street	1	1
Millicent Street	1	1
Mary Ann Street	1	2	5	8
Nazareth House	1	1	..	14	16
North Road	3	3
Park Place and Grove	6	6
Park Street	1	2	3
Quay Street	1	1
Queen's Street	1	1
Robert's Court	1	..	..	1
Raven Street	1	2	3
Ruperra Street	1	1
Rodney Street	1	..	1
Railway Terrace	1	..	..	..	1	..	..	2
Scott Street	1	..	3	4
St. Mary Street	2	3	5
Stanley Street	1	1
Station Terrace	1	2	3
Tredgar Street	1	..	..	..	1	1	2	2	7
Taff Vale Railway	1	1
Trinity Street	1	..	..	1
Union Street	1	..	2	3
Wood Street	1	2	3
Windsor Place	2	2
Womanby Street	1	1
Total	..	1	..	1	2	1	4	19	25	118	171

SOUTH WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total
Angelina Street	1	..	..	1	..	3	5
Allen's Arch	1	1
Alice Street	3	1	4
Adelaide Street and Place..	2	..	1	..	..	1	3
Bute Esplanade	1	1
Bute Street and Place	1	1	1	12	15
Crichton Street and Place..	1	1	..	..	..	..	4	6
Canal Parade	1	1
Christina Street	2	1	..	..	..	1	2	..	1	7
Clarence Place and Embankment.	..	1	..	..	..	..	..	..	..	6	7
Dudley Street and Place	1	1	..	2
Eleanor Street	1	1
Evelyn Street	1	2	1	4
Francis Street	1	2	3
George Street	3	..	3	6
Glamorgan Canal	3	3
Harpur Street	1	1
Harrowby Street	1	..	..	1	..	..	..	..	1	3
Herbert Street	4	..	1	1	6
Hannah Street	1	1
Henry Street	1	1
Hunter Street	1	..	6	7
Hamadryad Hospital	1	..	2	3
John Street	1	1	..	1	3
James Street	1	1
Louisa Street	1	..	..	..	..	..	1	..	6	8
Loudoun Square	1	..	..	..	..	..	1	3	5
Mount Stuart Square	1	1	2
Margaret Street..	3	3
Maria Street	1	1	..	1	3
Nelson Street	1	..	..	2	3
North Church Street	1	2	3
North Loudoun Place	2	2
Old Sea Lock	1	1
Penarth Road and Terrace	2	2
Peel Street	1	2	3
Percy Street	2	2
Pomeroy Street	1	2	6	9
South Church Street	1	..	..	..	..	..	2	2	5
South William Street	4	4
Sophia Street	1	..	..	..	..	1	..	3	5
Stuart Street	1	3	4
Tresillian Terrace	2	2
Trade Street	2	2
West Church Street	1	1	2
Windsor Esplanade	3	3
West Wharf	1	1
Total	5	4	1	5	..	10	16	19	109	169

CATHAYS WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Allensbank Road and Crescent	3	4	7
Barracks	2	2
Cairns Street	1	3	..	15	18
Coburn Street	1	1	2	9	13
Crwys Road	1	..	2	3
Cathays Terrace	2	5	7
Cogan Terrace	1	..	1
Cranbrook Street	2	..	1	3
Clun Terrace	1	..	2	3
Catherine Street	1	1
Dogfield Street	1	1	..	..	..	1	6	9
Daniel Street	3	3	6
Darran Street	1	..	..	..	..	1
Flora Street	1	2	3
Fitzroy Street	1	1
Florentia Street	1	1
Glynrhondda Street	2	2
Hirwain Street	2	..	2	4
Harriett Street and Place	1	..	..	..	..	3	4	8
Llantrisant Street	1	..	5	6
Llanishen Street	1	1
Llandough Street	2	2
Letty Street	2	2
Llantwit Street	4	4
Llanbleddian Gardens	2	..	2
Middy Street	1	1	2
Monthermer Road	2	..	2
Manor Street	2	5	7
Miskin Street	1	..	3	4
Malefant Street	3	3
Mundy Place	1	1
May Street	1	1
Merthyr Street	2	4	6
Minister Street	2	..	..	..	..	..	1	1	4
Richards Street	1	1	..	..	1	..	2	5
Robert Street	4	4
Ruthin Gardens	1	2
Spencer Street	1	..	..	..	..	..	..	2	4	7
Salisbury Road	1	2	3
Thesiger Street	1	..	..	..	1	1	3
Treorhy Street	1	1
Tewkesbury Street and Place	1	1	..	..	..	1	1	2	6
Talgarn Street	1	..	..	..	..	2	4	7
Treherbert Street	1	..	..	1
Woodville Road	1	1	8	10
Whitechurch Road and Place	2	..	..	..	..	1	..	3	6
Wyverne Road	1	..	..	..	..	..	3	2	6
TOTAL	1	6	5	3	1	2	16	38	129	201

PARK WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phtisis.	Respiratory Diseases.	Other Causes.	Total.
Alfred Street	1	..	4	5
Albany Road	2	2	4
Arran Street	5	5
Angus Street	1	4	5
Arabella Street	1	2	5	8
Braeval Street	1	1
Bangor Street and Place	2	2
Bedford Street and Place	1	..	..	..	..	2	1	8	12
Byron Street	1	4	5
Castle Road	1	..	..	..	..	1	..	3	6	11
Cyfarthfa Street	1	1	3	5
Crofts Street	1	..	..	1	2	..	4
Cottrell Road	1	1
Convent	1	..	3	4
Claude Road	1	1
Donald Street	1	..	..	2	2	6	11
Daviot Street	1	1
Diana Street	1	..	..	..	..	1	7	9
Elm Street	1	..	..	1	2
Fairoak Road	1	1
Gordon Road	1	..	..	1
Glenroy Street	1	..	..	..	..	2	..	5	8
Inverness Place	1	1	2	4	8
Kincraig Street	1	1
Keppoch Street	1	1	2	2	6
Lily Street	1	1	2
Lochaber Street	1	1
Lowther Road	1	..	..	1
Moy Road	1	..	..	1	..	..	2	5	1	10
Morlais Street	1	..	..	..	..	..	..	1
Milton Street	2	5	7
Mackintosh Place	1	..	..	..	..	2	1	6	10
Ninian Road	3	3
Northcote Street	1	1
Newport Road	1	2	3
Olga Road	1	1
Oxford Street	2	3	5
Penywain Road	1	..	1	2
Plasnewydd Road and Place	1	1	2	4
Penlline Street	1	1	2
Russell Street	1	1	1	5	8
Rose Street	1	1
Richmond Road and Crescent	1	..	2	9	2
St. Peter Street	1	1	2
Strathnairn Street	1	..	..	..	..	..	..	4	5
Shakespeare Street	1	..	..	..	..	1	2
The Parade	2	2
Treharris Street	1	4	5
Tavistock Street	1	1
Talworth Street	2	2	4
Tulloch Street	1	..	1
Upper Kincraig Street	1	..	..	..	..	..	1	2
Wordsworth Avenue	1	1
Total	2	4	3	4	..	6	22	42	137	220

ADAMSDOWN WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhea.	Phthisis.	Respiratory Diseases.	Other Causes	Total.
Augusta Street	1	6	7
Ascog Street	1	1	1
Adam Street	1	..	..	..	3	9	13
Adamsdown Square and Place	1	1	1
Buzzard Street	1	..	3	4
Bristol Channel	2	2	2
Comet Street	2	1	..	3
Cycle Street	1	1	2
Clifton Street	1	2	3
Clevedon Terrace	1	1
Cumnock Place and Terrace	1	..	..	1	2
Cumrae Street and Place	2	..	2
Constellation Street	1	1	3	5
Copper street	3	3
Duffryn Street	1	..	..	1	1	4	7
Davis Street	1	1
Dowlais Works	1	1
East Dock	6	6
Ellen Street	2	2
Godfrey Street	1	..	..	..	1	3	5
Gaol Lane	1	..	..	..	..	1	2
Galston Street and Place	1	1	2	4
Garth Street and Court..	1	..	4	5
Gwendoline Street	1	..	..	..	1
Gold Street..	1	1
Glossop Road and Terrace	4	4
Howard Terrace, Gardens & Street	2	..	2
Inchmarnock Street	2	1	3
Ivor Street	1	1
Iron Street	1	1	2
Infirmary	2	..	3	5	67	77
Kilcatten Street	1	..	1
Kerrycroyst Street	1	1
Longcross Street	1	1
Lead Street..	1	1
Lady Margaret Terrace.	1	..	..	1
Meteor Street	1	..	..	1
Metal Street	2	2
Moon Street	1	..	..	..	..	..	1	1	..	3
Moirs Street, Place, and Terrace	1	4	5
Morgan Street	1	1	2	4
North William Street	1	1	..	2	4
North Luton Street and Place	1	2	3
Noah Street	1	1
Newport Road	3	3
Piercefield Place	1	..	1
Prison, H.M.	1	1
Planet Street	5	2	7
Prince Leopold Street	1	2	3
Pendoylan Street	1	..	2	3
Rosemary Street	1	1
Roland Street	1	1	2	4
Rodney Street	1	1
Roath Dock and Basin	8	8
South Luton Place	1	..	2	3
Sandon Place and Street	3	3	4	10
System Street	1	2	3
South Terrace	1	..	1
Taff Street	4	4
Tin Street	2	2
Tyndall Street	3	6	9
Victoria Street	1	..	..	2	3
Windsor Road	1	1	1	3
West Luton Place	1	1
West Dock	5	5
Zine Street...	2	2
TOTAL	1	..	..	4	2	4	22	45	201	279

RIVERSIDE WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phtisias.	Respiratory Diseases.	Other Causes.	Total.
Ann Street..	2	2
Beauchamp Street	2	2
Brook Street	4	4
Berthwin Street	1	1	2
Blackstone Street	1	..	1
Cowbridge Road	2	6	8
Coldstream Terrace	1	2	3
Craddock Street	1	1	..	6	8
Clare Road, Street, and Gardens	1	1
Cathedral Road	2	3	5
Cathedral Road (Lower)	1	..	..	..	1	2	4
Dispenser Gardens and Street	1	1
De Burgh Street	4	4
Eldon Street	2	5	7
Gloucester Street	1	1	2
Halket Street	1	3	2	6
Hamilton Street	1	1
King's Road	1	2	..	7	10
Kyveilog Street	1	..	..	..	..	..	..	..	1
Lewis Street	1	3	4
Mortimer Road	1	1
Machen Place and Street	1	1
Neville Street and Place	1	..	5	6
Pontanna Street and Place	2	..	..	..	2
Plantagenet Street	3	3
Picton Place	1	1
Plasturton Avenue, Place and Terrace	1	..	..	..	..	1	2	4
Plasturton Gardens	1	..	1	2
Rennie Street	2	2
Ryder Street	2	..	1	3
Rawden Place	3	3
Smeaton Street	2	..	2
Severn Road	2	6	8
South Morgan Street	1	1
Sneyd Street	1	1
Telford Street	3	3
Talbot Street	1	..	..	..	1	..	4	6
Tudor Road..	2	2
Union Workhouse	2	..	..	..	..	7	46	31	168	254
Wellington Street	1	..	4	9	14
Wyndham Crescent	1	..	1	3	5
Wyndham Road	6	6
Wyndham Street and Place	1	1
Wells Street	1	1	4	6
Total	3	..	2	1	..	13	56	57	281	413

CANTON WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Atlas Road and Place	2	2	4
Aldsworth Road	2	1	5	2	10
Alexandra Road	1	1	..	..	1	3
Albert Street	1	..	..	8	9
Alpha Place	1	1	1
Brunswick Street	1	2	3
Brecon Street	2	2	2
Beda Road	1	..	..	..	2	5	8
Carinathen Street	1	1
Clive Road	1	..	..	..	..	3	3	4
Chancery Lane	1	..	2	3	6
Cowbridge Road	1	..	3	4	8
Cardigan Street	1	1
Cumberland Street	1	..	..	..	..	3	4
Conway Road	2	2	2
Conybeare Road	3	3
Daisy Street	2	2
Delta Street	2	2
Denton Road	1	..	..	..	..	..	2	3
Egham Street	1	1	2
Egerton Street	2	5	7
Eldon Road	1	7	8
Ethel Street	2	2	3	10	17
Eton Place	1	1
Fern Street	1	1
Forrest Road	1	..	1	2
Grosvenor Road	1	3	4
Glynne Street	1	1	2
Glamorgan Street	2	3	5
Gray Street	1	2	3
Harvey Street	1	3	2	6
Hanover Street	1	..	..	..	1
Ivy Street	1	2	3
Kingsland Road	1	..	1
Lausdowne Road	3	3
Leckwith Road and Place	2	6	8
Lyndhurst Street	1	..	2	3
Littleton Street	1	..	1	5	7
Llandaff Road	6	6
Llanfair Road	1	..	..	..	..	..	1	4	6
Loftus Street	1	1
Lincoln Street	2	3	5
Market Road	1	1
Major Road	1	..	3	4
Norfolk Street	1	1
Nottingham Street	1	1
Nesta Road	1	..	..	..	..	..	2	3
Pictou Place	1	1
Pontcanna Street, Terrace and Place	1	1
Penline Road	1	3	4
Penypeel Road	3	4	7
Penbroke Road	1	1
Rolls Street	1	..	2	2	5
Railway Terrace	1	1
Rectory Road	1	1
Radnor Road	1	..	..	2	3
Romilly Road and Crescent	1	..	..	3	4
St. John's Crescent	2	2
Severn Road	1	..	..	..	..	..	1	..	4	5
Springfield Place	1	..	..	..	..	1	1	2	4	9
Tintern Street	1	..	1
Tuberville Place	1	1
Theobald Road	1	2	3
Thornhill Street	1	1
Turner Road	1	..	..	1	2
Westmoreland Street	1	1
Wellington Street	2	3	5
Westbury Terrace	1	1	2
Welby Road	1	1
Wells Street	1	..	1	3	5
TOTAL	2	1	3	2	..	13	12	52	168	253

ROATH WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Agate Street	2	2
Arthur Street	1	1
Albany Road	2	2
Bradley Street	1	..	1	1	..	2	5
Bertram Street	1	..	..	8	9
Beresford Road	1	1
Blanche Street	1	..	..	..	2	2	5
Broadway	1	3	6	9
Connaught Road	5	5
Crofts Street	1	1	2
Cecil Street and Crescent	1	..	..	..	..	..	..	..	6	7
Clifton Street	2	2
Cottrell Road	1	2	7	10
Claude Road and Place	1	2	3
Cressy Road	1	..	1
Cyril Crescent	1	..	..	..	..	..	..	1
Diamond Street	2	5	5	12
Emerald Street	3	2	5
Elm Street	2	2
Fort Street	2	2
Harold Street	3	3
Helen Street	2	1	6	9
Marlborough Road	1	2	3
Nora Street	1	1	4	8	14
Newport Road	6	6
Oakfield Street	2	2
Partridge Road	1	1	5	7
Pengam	1	..	..	..	..	..	1
Pearl Street, Crescent, and Place	1	..	..	..	..	1	2	2	13	19
Penylan Road	5	5
Rose Street	1	..	..	..	..	1	1
Ruby Street	1	..	..	..	..	..	..	..	5	6
Richards Terrace	4	4
Sapphire Street	2	2
Spring Gardens Place and Terrace	2	..	..	1	2	..	5
Stacey Road	1	1	1	4	7
Theodora Street	2	4	6
Topaz Street	1	..	..	..	..	1	3	5
Upper Kinraig Street	1	..	1
Wellfield Place and Road	1	1
Total	3	..	2	5	..	5	12	34	132	193

GRANGETOWN WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Pneumonia.	Respiratory Diseases.	Other Causes.	Total.
Allerton Street	1	2	1	4
Amherst Street	1	1	2	4
Bromfield Street	1	..	..	..	..	1	2
Bedwas Street	1	..	..	..	..	1	..	2
Blaenclydach Street	1	..	..	..	..	1	2
Bradford Street	1	..	..	..	1	..	2
Bromsgrove Street	1	..	..	..	..	..	..	..	4	5
Corporation Road	1	..	1	1	..	2	2	3	10	20
Clive Street	1	..	..	..	..	..	..	3	15	19
Cambridge Street	1	1
Compton Street	1	..	..	..	..	..	..	1	4	6
Cornwall Road	1	1	3	6	11
Clydach Street	1	..	..	..	1
Clare Road	1	..	..	..	3	1	5
Coedcae Street	3	3
Cymmer Street	2	2
Court Road	2	..	..	..	..	2	..	2	3	9
Chester Street and Place	2	3	5
Dorset Street and Place	2	1	3	3	9
Devon Street and Place	1	1	..	2	4
Durham Street	1	1
Davis Place	1	..	..	1
Ely Harbour	1	..	..	1
Ely River	1	1
Earl Street	1	..	..	1	2
Forrest Street	1	1
Ferry Road	1	2	3
Ferndale Street	1	1	2
Grange Gardens	1	1	2
Holmesdale Street and Terrace	2	7	9
Hewel Street	1	..	..	6	7
Hereford Street	1	2	1	1	5
Knole Street	2	1	..	3
Kent Street	5	5
Llanbradach Street	1	1	2
Lucknow Street	1	1
Llanmaes Street	1	..	..	..	..	..	1	2	7	11
Ludlow Street	2	2
Monmouth Street	1	..	1	2
Machen Street	1	1	2
Maitland Place	1	..	..	1
Madras Street	1	2	3
North Clive Street	1	1	..	..	..	1	3	6
Oakley Street	1	..	..	2	3	6
Pentrebane Street	2	5	7
Penhevad Street	1	3	4
Penarth Road	2	..	..	8	10
Paget Street	2	..	..	..	..	..	..	2	6	10
Redlaver Street	1	1	3	5
Rookwood Street	1	1
Rutland Street	1	2	3
River Taff	1	1
Sevenoaks Street	1	..	..	1	..	..	..	..	1	3
St. Fagans Street	1	1
Somerset Street	1	2	1	2	6
Sea View	1	1
Stoughton Street	3	3
Saltmead Road	3	3
Stockland Street	7	7
Sanatorium	3	..	14	13	..	10	..	..	1	2	43
Tynant Street	1	..	..	..	1
Thomas Street	1	..	1	2
Taff Embankment	1	1
Wedmore Road	1	..	2	3
Warwick Street and Place	1	..	1
York Place	2	2
Total	3	8	16	16	7	11	16	21	50	165	313

SPLOTT WARD.

NAME OF STREET.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Phthisis.	Respiratory Diseases.	Other Causes.	Total.
Aberdovey Street	1	2	3
Adeline Street	1	..	..	..	..	..	3	2	3	14
Aberystwyth Street	1	..	..	..	1	2	4
Burnaby Street	1	3	4
Bridgend Street	2	2	4
Cameron Street	1	1	2
Coveney Street	1	..	..	..	2	2	5
Caerphilly Street	1	1	..	..	..	3	4	9
Cornelia Street	1	6	7
Carlisle Street	1	..	3	8	12
Enid Street	1	1
Eyre Street	1	..	1	3	5
Habershon Street and Place	1	..	11	14
Howard Street and Place	1	..	1	2
Hinton Street	1	..	1	2
Janet Street	5	5
Layard Street	2	..	2
Moorland Road	2	8	10
Marion Street	1	..	..	..	..	3	2	6
Milford Street	1	..	..	1	2
Menelaus Street..	2	2
Ordell Street	1	..	1	4	6
Portmanmoor Road	1	1	..	..	..	..	5	7	14
Pontypridd Street	2	..	2	5	9
Railway Street and Crescent	1	..	1	1	7	11	21
Roth Basin	1	1
Swinton Street	1	1	2
Seymour Street	1	..	1	2
Sploitt Road	1	..	3	4
Singleton Road	1	1	1	3
Swansea Street and Terrace	1	..	1	2	4
Tenby Street	1	..	..	3	4
Walker Road	2	1	3
Wimborne Street	2	4	6
Wilson Street	1	1
Total	1	1	3	4	..	9	10	49	118	195

CARDIFF SANATORIUM.

The following Report of the Medical Superintendent shows that during the year 1903 1,157 cases of infectious disease were under treatment, as compared with 1,237 in the year 1902 :—

Report for the year 1903.	0 to 5 years	5 to 15 years	15 to 25 years	25 to 35 years	35 to 45 years	45 to 55 years	55 to 65 years	65 to 75 years	Totals
1.—Remaining in Hospital on 31st Dec., 1902—									
Scarlet Fever	25	71	14	2	2	—	—	—	114
Enteric Fever	—	3	—	2	—	—	—	—	5
Diphtheria	5	13	2	—	—	—	—	—	20
Small Pox	—	—	—	1	—	—	—	—	1
Total	30	87	16	5	2	—	—	—	140
2.—Admitted during the year 1903—									
Scarlet Fever	164	364	70	20	5	1	—	—	624
Enteric Fever	3	22	33	20	9	3	—	—	90
Diphtheria	68	109	27	14	4	2	—	—	224
Small Pox	4	5	15	23	11	4	7	2	71
Typhus Fever	—	5	1	—	1	—	1	—	8
Total	239	505	146	77	30	10	8	2	1017
Total under treatment in 1903 ..	269	592	162	82	32	10	8	2	1157
3.—Of the above there were Discharged—									
(a) Recovered—									
Scarlet Fever	163	346	80	20	7	1	—	—	617
Enteric Fever	3	20	28	13	3	3	—	—	70
Diphtheria	56	112	26	12	4	2	—	—	212
Small Pox	4	5	15	23	9	3	7	2	68
Typhus Fever	—	5	1	—	—	—	1	—	7
Total	226	488	150	68	23	9	8	2	974
(b) Died—									
Scarlet Fever	9	6	—	—	—	—	—	—	15
Enteric Fever	—	1	1	4	4	—	—	—	10
Diphtheria	12	2	1	—	—	—	—	—	15
Small Pox	—	—	—	1	2	1	—	—	4
Typhus Fever	—	—	—	—	1	—	—	—	1
Total	21	9	2	5	7	1	—	—	45
4.—Remaining in Hospital, Dec., 1903—									
Scarlet Fever	17	83	4	2	—	—	—	—	106
Enteric Fever	—	4	4	5	2	—	—	—	15
Diphtheria	5	8	2	2	—	—	—	—	17
Small Pox	—	—	—	—	—	—	—	—	—
Total	22	95	10	9	2	—	—	—	138
Total under treatment in 1903 ..	269	592	162	82	32	10	8	2	1157

Mortality per cent. under treatment—

Scarlet Fever	2.03	per cent.
Enteric Fever	10.5	"
Diphtheria	6.14	"
Small Pox	5.5	"
Typhus Fever	12.5	"

B. W. BROAD, M.B.,
Medical Superintendent.

Comparison between the specimens received in 1902 and 1903:—

TABLE II.

Nature of Examination.	1902.	1903.	Increase.	Decrease.
Suspected Diphtheria	217	270	53	—
Suspected Typhoid	114	188	74	—
Sputa for Tubercle Bacilli	263	256	—	7
Waters—Bacteriological Examination	298	289	—	9
„ Chemical Examination	218	180	—	38
Bacteriological Examination of Milk	41	17	—	24
Sewage and Sewage Effluent Examinations	124	157	33	—
Diseased Meat	52	49	—	3
Anthrax in Swine	—	4	4	—
Other Examinations	255	333	78	—
	1,582	1,743	242	81
			Increase. 161.	

As shewn in Table II., there has been a distinct increase in the total number of specimens and samples received over the previous year.

The number of cases of suspected Diphtheria show a slight increase over the previous year, though, fortunately, the figure is not to be compared to that in the year 1901, when 391 examinations were made at the Laboratory.

Though there has been a fall in Diphtheria figures from that of the year 1901, the number of cases of suspected Enteric has risen considerably, being higher than in 1901 or 1902. The increase is in part accounted for by the incidence of Enteric in Merthyr.

The increase in the number of Sewage and Sewage Effluent examinations is one due to the bacteriological examinations which are now being systematically carried on, hitherto entirely for the County, but during the ensuing year for Cardiff as well.

The Soil examinations, on which a preliminary report was submitted, has been continued, and will form the subject of a full Report at the close of 1904.

TABLE III.

This Table shows the results of the Examinations made for the diagnosis of Diphtheria, Typhoid Fever, and Pulmonary Tuberculosis:—

Nature of Examination.	Number of Positive Results.	Number of Negative Results.	Total.
Suspected Diphtheria	62	208	270
„ Typhoid Fever	103	85	188
„ Pulmonary Tuberculosis	109	147	256

The percentage of Positive Results was, for Diphtheria, 22·96 per cent.; for Typhoid Fever, 54·78 per cent.; and for Pulmonary Tuberculosis, 42·57 per cent.

Table IV. gives the number of specimens received from Cardiff and the County respectively. The samples from Swansea are included in the County figures.

In this Table the results are divided into waters, sewages (including sewages and effluents), and specimens, the latter including all other examinations.

TABLE IV.

Source.	Waters Examined.	Sewages Examined.	Specimens.	Total.
Cardiff	138	—	855	993
Administrative County	151	157	442	750
	289	157	1,297	1,743

INSANITARY DWELLINGS.—Since the passing of the Housing of the Working Classes Act, 1890, a considerable amount of insanitary property has been dealt with under the Second Part of this Act, which relates to “Buildings unfit for Human Habitation.”

No large “Unhealthy Areas” exist in the Borough which could properly be dealt with by Improvement Schemes under the First Part of the Act.

Amongst the dwellings which have been permanently closed, either by a closing order as provided by Section 32 of the Act, or by the voluntary action of the owner after initial proceedings by the Sanitary Authority, the following may be mentioned:—Mill Lane Court, 34 Houses in Stanley Street, 12 Houses in Leckwith Road, Kettle Court, Evans’ Court, Union Buildings, Sandon Court, Dalton Court, Rising Sun Court, Jones’ Court (Womanby Street), The Tunnel (Queen Street), Temperance Terrace (Working Street), Queen’s Place, Masons’ Arms Court, Love Lane Court, Castle Court, Moulders’ Arms Court, Bryant’s Court, Matthews’ Court, Stacey Court, Picton Cottages, Stag Terrace and Jenkins’ Court; During December of 1903, official representations were made (under Section 30) by the Medical Officer of Health, that the following houses were unfit for habitation—2 houses in Gulliver’s Court, 2 houses in Evans’ Court, 2 houses in Jonathan’s Court, and 5 houses in Spring Garden Court.

INSPECTION OF FACTORIES AND WORKSHOPS.—The Factory and Workshop Act of 1901 makes considerable alterations in and additions to the duties hitherto falling upon Medical Officers of Health. Under Section 132 the Medical Officer of Health is required, in his Annual Report, to deal specifically with the administration of the Act (so far as the matters under the charge of the Sanitary Authority are concerned), and to send a copy of this Report to the Secretary of State.

The work carried out during the year 1903 is shewn in the subjoined tables :

Sec. 101 of the Act imposes important duties on Sanitary Authorities in regard to underground bakehouses. The Section provides that no underground bakehouse shall be used as such unless it was so used at the time of the passing of the Act, *i.e.*, August 17th, 1901, and further, that after the 1st January, 1904, no underground bakehouse (whenever established), may be used unless the Sanitary Authority is satisfied that it is suitable for the purpose in regard to construction, light, ventilation, and in all other respects, and have given it a certificate of suitability. A definition of the term “underground bakehouse” is given for the first time in this Act:—“A bakehouse is to be deemed an underground bakehouse if any room used for baking or for any process incidental thereto, is so situate that the surface of the floor is more than three feet below the surface of the footway of the adjoining street, or of the ground adjoining or nearest to the room.” The question of the conditions under which these certificates should be granted is one of some difficulty, as no detailed instructions are given in the Act.

The matter is left entirely to the discretion of the Sanitary Authority, subject to the general principle that all underground bakehouses must be suitable as regards construction, ventilation, light, and in all other respects.

This section of the Act was apparently framed with the intention of encouraging the total abolition of underground bakehouses, and there can be no doubt that it would have this effect if Sanitary Authorities throughout the country were to adopt a high standard of suitability. On the other hand as these certificates are not subject to periodical renewals the practical working of this part of the Act may, unless extreme care is taken, result in the prolonged use of unsuitable premises.

In Cardiff there were only 6 underground bakehouses at the time of the passing of the Act, four of these have since been abolished, as entirely unsuitable for the purpose.

Two certificates have been granted to the occupiers of underground premises after the completion of extensive structural alterations as required by the Sanitary Authority.

FACTORY AND WORKSHOP ACT, 1901.

Report of the Medical Officer of Health on the Administration of the Act in the Urban Sanitary District of Cardiff during the year 1903.

Classification and Inspection.—Total No. of Workshops in the District, as per Register, 1,329 including—172 Domestic Workshops, 201 Retail Bakehouses, 23 Laundries, and 933 Other Workshops.

Total No. of visits of inspection made during 1903 ... 2,092.

SANITATION.

	Workshops.	Domestic Factories and Domestic Workshops.
<i>Cleanliness</i> —		
No. of Notices served under P.H. Acts ..	163	19
No. of Notices to Cleanse, under Sec. 2 ..	89	6
Legal Proceedings .. ..	..	..
<i>Air Space</i> —		
No. of Notices to abate over-crowding ..	3	..
No. of Notices to affix card, Sec. 3 (4) ..	3	..
Legal Proceedings .. ..	..	..
<i>Ventilation</i> —		
No. of Notices under P.H. Act	6	..
Legal Proceedings .. ..	..	..
<i>Means of Ventilation</i> —		
Any action under the new powers of Sec. 7 ..	..	..
<i>Drainage of Wet Floors</i> —		
Action under Sec. 8	1	..

Additional Sanitation for "Retail Bakehouses":—No. of such premises in the District, 201.

ACTION TAKEN AS TO RETAIL BAKEHOUSES DURING 1903:—

	No. of Defects found.	Notices served.	Legal Proceedings.	Defects remedied.
As to Closets, etc., s. 97 ..	7	7	..	7
As to Water Cisterns, s. 97 ..	3	3	..	3
As to Drain Openings, s. 97 ..	..	..	..	..
As to Limewashing, etc., s. 99 ..	63	63	..	63
As to Sleeping Places, s., 100 ..	..	..	..	..

Underground Bakehouses.—No. of such premises in District, 2.

Sanitary Conveniences.—Date of adoption of Sec. 22 of the Public Health Acts Amendment Act, 1890, May 1st, 1891.

No. of defects discovered thereunder in factories or workshops during 1903—20.

(a) Closets insufficient or unsuitable, 12 (b) Closets not separate for sexes, 8.

No. of Notices issued under the Section during 1903 20.

Home Work. Sections 107 to 115.—Total No. of Lists of Outworkers received during 1903, 84 representing 45 Employers, 121 Contractors, and 172 Outworkers.

CLASSIFICATION OF LISTS RECEIVED :—

OUTWORK IN CONNECTION WITH	NO. OF LISTS RECEIVED.			Total No. of such Employers or Contractors.	Total No. of such Outworkers in the District.
	Up to Feb. 1st, 1903.	To Aug. 1st, 1903.	Total to Dec. 31st, 1903.		
Wearing Apparel	39	45	84	45	293

Outworkers' premises—No. inspected—172. Any prohibition as to infected houses (s. 110)—17.

General.—No. and nature of Sanitary defects reported to the Authority by H.M. Inspectors during 1903 14.

Action taken in consequence.—Notices served and defects remedied.

No. of infringements reported by Sanitary Authority to H.M. Inspector (*e.g.*, s. 133), 28.

INSPECTION OF FACTORIES AND WORKSHOPS.

UNDER THE FACTORY AND WORKSHOP ACT, 1901, AND THE SHOP HOURS ACTS, 1892-95,
AND THE SEATS FOR SHOP ASSISTANTS ACT, 1899.

During the year a large number of Workshops have been inspected. The results of these inspections are given in the annexed Tables :—

Nature of Workshops Inspected.					Number on Register.	Number of Inspections.
Bakers	...	...	..	...	201	352
Tailors	...	...	...	...	230	678
Dressmakers	...	...	...	...	243	235
Milliners	...	...	...	...	62	56
Bootmakers	...	...	...	...	70	63
Carpenters and Joiners	...	...	...	...	41	38
Laundries	...	...	...	...	23	51
Bottlers	...	...	...	...	31	32
Wheelwrights and Smiths	...	...	...	...	37	28
Printers, Bookbinders, and Paper Bag Makers	...	...	...	...	17	35
Packers	...	..	...	...	27	33
Cabinet Makers and Upholsterers	...	...	...	...	36	51
Sail, Basket, Blind, and Mat Makers	...	...	...	...	13	4
Picture Frame Makers	...	...	...	...	17	9
Piano Manufacturer	...	...	...	...	1	9
Plumbers	...	...	...	...	1	7
Engravers, Jewellers and Dentists	...	...	...	...	10	8
Tobacco Manufacturers	...	...	...	...	5	15
Cork and Firewood Cutters	...	...	...	...	6	7
Leather Workers	...	...	...	...	13	4
Waggon Builders and Engineers	...	...	...	...	39	34
Umbrella and Oilskin Manufacturers	...	...	...	...	10	11
Paint, Asphalt, and Cement Works	...	...	...	...	4	18
Cycle and Machine Manufacturers	...	...	...	...	16	13
Pipe Makers and Stone Masons	...	...	...	...	4	8
Total	...	...	...	...	<u>1157</u>	<u>1799</u>

Notices of New Workshops from Inspector of Factories under Factory and Workshop Act, 1901, Sec. 127, Sub. 3—65.

Notices from Inspector of Factories *re* Sanitary Defects in Workshops, under Factory and Workshop Act, 1901, Sec. 5, Sub. 1—14.

Notices sent by Sanitary Authority to Inspector of Factories under Factory and Workshop Act, 1901, Sec. 133—28.

NUISANCES IN WORKSHOPS.

	Bakers.	Tailors.	Dressmakers.	Carpenters.	Paint and Cement Works.	Cabinet Makers.	Milliners.	Printers.	Smiths.	Engineers.	Laundries.	Boothers.	Bootmakers.	Umbrella and Oil-skin Manufacturers.	Tobacco Manufacturers.	Machine Manufacturers.	Jewellers.	Packers.	Saddlers.	Plumbers.	Pirewood Cutlers.	Pipe Makers and Stone Masons.	Piano Manufacturers.
W.C. accommodation provided ..	1	3	..	3	2	3	..	2	1	1	..	..	..	..	1	..	..	2	1	..	..	..	..
Drains trapped and repaired ..	..	6	6	..	..	2	1	1	1	3	..	2	3	1	..	1	..	..	..	1	..	..	..
Flushing apparatus provided ..	..	3	3	1	1	1	1	..	..	3	..	..	1	..	..	..	1	..	..	..	..	..	..
W.C.'s cleaned and repaired ..	..	1	2	1	1	1	1	..	1	1	1	..	..	..	..	..	..	1	..	..	..	1	..
Limewashing ..	63	13	4	..	1	1	1	..	1	..	..	..	3	1	..	..	..	1	..	..	..	..	..
Workrooms ventilated ..	..	2	1	..	..	1	1	1	1	1	2	..	1	..	..	..	..	..	..	..	..	..	..
Paving, roofs, &c., repaired ..	12	11	5	..	..	1	1	1	1	1	..	1	1	..	..	..	..	..	..	..	..	..	..
Inside W.C. ventilated ..	..	1	1	..	..	1	1	1	..	..	2	3	1	..	..	..	..	..	..	..	1	..	..
Defective smoke stacks and black smoke	1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Accumulations ..	7	4	..	..	1	1	..	..	..	1	1	..	..	..	..	1	..	..	..	..	1	..	..
Manure pits erected and drained ..	2	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..
Workrooms overcrowded ..	..	1	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Stagnant water in cellar ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
W.C.'s removed from workrooms ..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Floors drained ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Animals so kept ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	96	50	25	5	5	12	4	5	4	11	8	7	8	2	1	2	1	7	1	1	2	4	1

SHOP HOURS ACT.

NATURE OF SHOPS INSPECTED.	Number of Inspections.	Employing Young Persons.	Employing Females.	Seats Provided.
Drapers	137	121	134	134
Boot Dealers	85	74	60	60
Grocers	128	115	5	5
Butchers	106	88	...	...
Hairdressers and Tobacconists	95	83	60	60
Newsagents and Stationers	81	65	66	66
Confectioners	77	47	69	69
Public Houses	56	11	56	56
Chemists	14	10	...	...
Fruiters	68	44	39	39
Ironmongers	32	26	...	...
Jewellers	2	1	...	...
Outfitters	29	26	1	1
Furniture Dealers	9	4	...	...
Fancy Dealers	68	55	60	60
Seedsman	5	4	...	...
Cycle Dealers	9	5	1	1
TOTAL	1001	779	551	551

MEAT INSPECTION.

The inspection of meat and other articles of food has been carried on as usual during the year, with no changes in or addition to the staff of inspectors. As all the slaughtering within the limits of the Borough is done in the Public Abattoirs belonging to the Corporation, it is comparatively easy to exercise an efficient inspection of meat and to detect conditions which render it unfit for food before it is exposed for sale.

Under these circumstances when unsound meat is discovered and is voluntarily surrendered by the owner no proceedings are taken under Sections 116 and 117 Public Health Act, 1875, and no order for destruction is in such cases made by the magistrates, but the meat is in every instance examined by the Medical Officer of Health, and destroyed under the supervision of the Inspector of the Sanitary Authority.

Mr. C. Moir, M.R.C.V.S., Veterinary Surgeon to the Corporation, is the Chief Inspector of Meat, and by arrangement between the Health Committee and the Property and Markets Committee, Mr. N. Rees, the Superintendent of the Roath Abattoirs, and four of his Assistants are appointed to assist in the inspection of meat at the Public Slaughter Houses. A Special Inspector, Mr. MacGregor, who was formerly a butcher, acts as Inspector of Food in Shops.

The Bacteriologist in our Public Health Laboratory, Dr. H. A. Schölberg, has rendered most valuable services in connection with the inspection of meat in Cardiff. In each case of suspected Tuberculosis or other disease in any carcase, specimens of the morbid deposit are forwarded to him for examination. The existence of the Laboratory is therefore fully justified on this ground alone, as without it no efficient examination of diseased meat could be carried on in the district.

The following Table gives the amount of meat in pounds found by the Medical Officer of Health to be unfit for food and destroyed, either with the consent or by an order of a magistrate, in each year during the period 1894—1903:—

Year.	..	..	..	Meat.	lbs.
1894	..	..	..	3,209	..
1895	..	..	..	4,523	..
1896	..	..	..	3,896	..
1897	..	..	..	10,824	..
1898	..	..	..	9,929	..
1899	..	..	..	14,205	..
1900	..	..	..	21,217	..
1901	..	..	..	33,696	..
1902	..	..	..	43,675	..
1903	..	..	..	41,710	..

During the year 1903 the number of animals slaughtered in the Public Slaughter Houses in the Borough was as follows:—

	Roath Abattoir.	Canton Abattoir.
Beasts	5,371	977
Sheep	32,929	6,741
Calves	3,354	201
Pigs	20,492	4,193
	<u>69,146</u>	<u>12,112</u>

UNSOOUND MEAT SEIZED OR SURRENDERED.

Place of Seizure.	No. of Animals.	Number Condemned by Magistrate.	Number Destroyed by arrangement with Owner.	Total Weight in lbs.
Roath Slaughter-house	72	1	71	28,904
Canton "	5	—	5	3,271
Cardiff Market	1	1	—	50
Total	78	2	76	32,225

The nature of the diseases detected in each case was as follows:—

Tuberculosis	..	..	..	46 Beasts.
"	..	..	..	14 Pigs.
"	..	..	..	1 Sheep.
"	..	..	..	1 Calf.
Injuries	..	..	..	4 Sheep.
"	..	..	..	2 Calves.
"	..	..	..	2 Pigs.
Decomposed ..	..	..	..	3 Sheep.
"	..	..	..	1 Pig.
Pyæmia	..	..	..	2 Pigs.
Abscess	..	..	..	1 Sheep.
Suspected Swine Fever	..	..	..	1 Pig.

OTHER ARTICLES OF FOOD SEIZED OR SURRENDERED.

Place of Seizure.	Description of Articles Seized.	Condemned by Magistrate.	Destroyed by arrangement with Owner.	Total Weight in lbs.
Central Meat Market	6 Pieces of Mutton	1	..	50
" " " "	7 " Beef	..	1	18
" " " "	25 " Pork	1	..	64
" " " "	22 Hams	..	1	116
Roath Market	25 Pieces of Pork	1	..	65
Shop	5 Fish	1	..	8
"	30 Hearts and 5 pieces of Mutton	..	1	90
	10 Tins of Preserved Fish	..	1	70
	1 Cask of Pigs Feet	..	1	330
	1 " of Sheep's Tongues	..	1	112
	2 Tongues and 7 pieces of Beef	..	1	85
	1 Bullock's Head, Liver and Spleen..	..	1	20
	2 Pieces of Pressed Beef	1	..	29
	49 Pieces of Pickled Beef and 1 Pickled Tongue	1	..	224
	18 Tins of Pears, and 7 Tins of Condensed Milk	..	1	50
	1 Bag of Salt Beef	..	1	100
	Liver	..	1	10
Railway Station	1 Cask of Fish	..	1	224
" "	3 Boxes of Fish	..	1	756
Stores	18 Pieces of Pickled Beef	..	1	18
	4 Boxes of Fish	..	1	672
	42 " "	..	1	630
Ice House	Box of Pork	..	1	56
	52 Hams, 3 Boxes of Fish, 2 Casks of Fish, 3 Lambs, 20 Chickens, 12 Turkeys, 20 Geese, 14 Pieces of Mutton, 2 Pieces of Beef	..	1	1,936
	40 Rabbits, 20 Hares and Sausages	..	1	70
	7 Tongues	..	1	200
	2 Tubs of Meat	..	1	200
	2 Baskets of Meat	..	1	200
	2 " and 4 Ox Heads	..	1	1,092
	5 Quarters of Beef	..	1	1,060
	14 Carcases of Sheep	..	1	340
	49 Geese, 22 Turkeys, and 6 Ducks..	..	1	390
	Meat	..	1	
Total	..	6	26	9,485

MIDWIVES ACT, 1902.

This Act came into operation on the 1st April, 1903, when the Council of the County Borough of Cardiff was constituted the Local Supervising Authority within the Borough. Section 8 of the Act provides that "The Local Supervising Authority may delegate, with or without any restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of this Act, to a Committee appointed by them, and consisting either wholly or partly of members of the Council, and the provisions of Sub-sections 1 and 2 of Section 82 of the Local Government Act, 1888, shall apply to every Committee appointed under this Section and to every Council appointing the same, and women shall be eligible to serve on any such Committees."

Under the powers of this Section the Local Supervising Authority delegated to the Health and Port Sanitary Committee all the powers and duties conferred or imposed upon them, and appointed the Medical Officer of Health Executive Officer in accordance with the suggestion contained in the Memorandum of the Central Midwives Board.

The first duty which devolved upon the Authority was to give notice of the effect of the Act, so far as practicable, to persons at present using the title of midwife. This was done by advertisement in the local newspapers, by large printed notices and by small handbills in the following terms left at the residence of the midwife.

This has resulted in 87 forms of application for certification being supplied to midwives, who have forwarded them to the Central Midwives Board. Of this number 47 have received their certificates to practice from the Board, and have received the Board's Rules.

These have given notice of their intention to practice within the area of the Borough, and have been placed on the Roll of Midwives and the Local Register.

MIDWIVES ACT, 1902.

"The Council of the County Borough of Cardiff, acting as the Local Supervising Authority, under Section 8 (7) of the Act, desires to draw attention to the chief provisions of the Midwives Act, 1902, which materially affects the legal position of all Midwives.

1. "After the 1st April, 1905, no woman may call herself a midwife unless certified as the Act provides.

2. "After the 1st April, 1910, no woman may practise (*i.e.* habitually and for gain attend women in child-birth otherwise than under the direction of a qualified medical practitioner), unless certified as the Act provides.

3. "Any woman who before the 31st March, 1905, claims to be certified under the Act may be so certified if

(a) "She holds a Certificate in Midwifery from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or the Coombe Lying-in Hospital and Guinness's Dispensary, or the Rotunda Hospital for the Relief of the Poor Lying-in Women of Dublin.

Or

(b) "She holds such other Certificate in Midwifery as the Central Midwives Board may approve.

Or

(c) "She satisfies the Central Midwives Board that she has been in *bond fide* practice as a midwife for at least one year prior to the 31st July, 1902, and that she bears a good character.

4. "A woman not included within one of these three classes will be required to pass the examination of the Central Midwives Board before obtaining a Certificate.

5. "Applications to be certified must be made to the Central Midwives Board in accordance with the rules and regulations to be prescribed by the Board, and such fees will be payable for the examination and the certificate as the Privy Council may sanction.

6. "The names of all certified midwives will be entered on the Midwives Roll.

7. "Every certified midwife must before commencing to practise, or holding herself out as practising, give notice in writing, on the prescribed form, to the local supervising authority, and must give a similar notice in the month of January in every year during which she continues to practise.

8. "No certified midwife may employ an uncertified substitute.

9. "A midwife may be suspended from practise in order to prevent the spread of infectious disease, or may be removed from the roll for disobeying the rules and regulations of the Central Midwives Board, or for other misconduct.

10. "Penalties are prescribed for any infringement of the foregoing provisions (1) (2) and (7); also for obtaining a certificate by false representation, or for wilful falsification of the Midwives Roll.

11. "An appeal lies to the High Court of Justice from any decision of the Central Midwives Board removing a midwife's name from the Roll, and to the Court of Quarter Sessions from any Summary Conviction for an offence under the Act.

12. "Every woman holding a certificate from the Central Midwives Board must, before holding herself out as a practising midwife or commencing to practise as a midwife, give notice in writing to the Local Supervising Authority. Forms for such notice may be obtained on application to—

Dr. WALFORD, Medical Officer of Health, Town Hall, Cardiff."

The Midwives Act confers upon the Local Supervising Authority extensive and responsible duties in connection with the supervision of all midwives certified under the Act, and practising within the area of their jurisdiction. These duties are as follows:—

- (1) To exercise general supervision over all Midwives practising within their area in accordance with the rules laid down under the Act.
- (2) To investigate charges of mal-practice, negligence, or misconduct on the part of any Midwife practising within their area, and, should a *prima facie* case be established, to report the same to the Central Midwives Board.
- (3) To suspend any Midwife from practise, in accordance with the rules under the Act, if such suspension appears necessary in order to prevent the spread of infection.
- (4) To report at once to the Central Midwives Board the name of any midwife practising in their area convicted of an offence.
- (5) During the month of January of each year to supply the Secretary of the Central Midwives Board with the names and addresses of all midwives who during the preceding year have notified their intention to practise within their area, and to keep a current copy of the roll of midwives, accessible at all reasonable times for public inspection.
- (6) To report at once to the Central Midwives Board the death of any midwife or any change in the name or address of any midwife in their area, so that the necessary alteration may be made in the roll.

In addition to the above powers and duties of the Local Supervising Authority, they are authorised to prosecute any offences under the Act punishable on summary conviction.

Up to the present all the Midwives certified under the Act, claimed admission to the Roll of Midwives on the ground of having been in *bona fide* practice as Midwives for twelve months previous to 31st July, 1902. From and after 1st April, 1905, no woman can be certified on this ground or on the ground that she has obtained certificates to practise Midwifery from any of the various bodies named in Section 2 of the Act. No woman can use the title of Midwife after that date, unless she is certified under the Act; it follows, therefore, that women desiring to be certified midwives, will in future have to comply with the conditions of training and qualification laid down in the Rules of the Central Midwives Board.

By this gradual process the ignorant and unqualified midwife will be abolished.

It is in my opinion desirable that a training centre for midwives should be established in Cardiff, otherwise some hardship will be experienced by women living in this neighbourhood who wish to obtain the Board's certificate. In the administration of the Act the services of the Woman Inspector (Miss A. Hoyle) have proved useful.

The midwives already on the local register are visited by her from time to time, in order to secure compliance with the rules of the Central Board. It is intended later on to issue printed pamphlets giving detailed directions relating to the use of disinfectants, and to the employment of proper safeguards against the spread of infection, as these matters are referred to in general terms in the rules.

SUMMARY OF WORK PERFORMED BY THE OFFICERS OF THE MEDICAL OFFICER OF HEALTH'S DEPARTMENT.

The following tables show the nature and extent of the administrative work of the department. The work is carried out by Mr. D. Vaughan, Chief Inspector of Nuisances, and his assistants, acting under the supervision of the Medical Officer of Health, and I have pleasure in reporting that the Inspectors have performed their difficult duties in a very satisfactory manner.

For the purposes of inspection, the Borough is divided into six districts as follows :—

				Name of District Inspector.	
District No. 1 comprising	...	Canton Ward	...	} T. W. Warren, Cert. San. Inst.	
		Riverside Ward	...		
" No. 2 "	...	Splott Ward	...	} W. Fisher, Cert. San. Inst.	
		part of Adamsdown Ward	...		
" No. 3 "	...	Park Ward	...	} F. Glover, Cert. San. Inst.	
		part of Cathays Ward	...		
" No. 4 "	...	Central Ward	...	} S. Evans, Cert. San. Inst.	
		part of Cathays Ward	...		
		and part of South Ward	...		
" No. 5 "	...	South Ward	...	} J. Strange, Cert. San. Inst.	
		Grangetown Ward	...		
" No. 6 "	...	Roath Ward	...	} S. Jeffery, Cert. San. Inst.	
		part of Adamsdown Ward	...		

HOUSE INSPECTION FOR THE YEAR 1903.

CENTRAL WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seullery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Love Lane	44	4	3	2	1	..	41	..	41	38	5	88
Mary Ann Street ..	48	6	5	1	..	..	43	..	43	35	12	21
Little Frederick Street	35	2	2	2	..	..	32	..	31	28	12	15
David Street	27	3	..	3	..	..	27	..	24	24	11	19

SOUTH WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seullery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Henry Street	16	4	..	2	4	..	16	..	16	15	..	1
Hodges Row	12	..	..	1	..	..	12	..	12	9	..	1
Louden Terrace ..	2	..	..	..	..	..	2	..	2	..	..	..
Alice Street	37	4	..	6	4	..	37	..	37	32	..	4
Christina Street ..	59	1	..	2	1	..	56	..	54	37	1	6
Angelina Street ..	42	1	..	1	1	..	37	..	37	21	1	..
Frances Street ..	25	2	..	1	..	..	25	..	25	20	..	5
Franklin Street ..	6	..	..	..	..	..	6	..	6	6	..	2
Adelaide Place ..	8	2	..	..	1	..	8	..	8	7	..	..

CATHAYS WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seullery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Merthyr Street ..	54	2	1	1	..	..	54	..	54	54	3	21
Llantrisant Street ..	80	2	1	2	..	..	82	..	63	61	10	21
Cathays Terrace ..	195	14	2	15	2	1	158	1	160	158	51	78
Cairns Street ..	199	6	8	2	1	..	199	..	199	197	53	85

PARK WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seulery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Castle Road	247	9	3	5	5	1	378	1	219	107	15	23
Milton Street	66	11	10	11	1	..	67	..	67	65	11	26
Russell Street	45	4	2	4	..	..	45	..	45	45	3	11
Oxford Street	46	2	1	3	..	..	46	..	46	45	2	7
Byron Street	49	1	1	4	..	..	49	..	49	49	10	23
Shakespeare Street	82	9	2	9	3	..	83	..	83	81	14	19
Clive Place	9	..	..	..	..	..	9	..	9	9	5	..
Croft Street	27	1	1	..	..	..	29	..	27	27	1	1
Lily Street	30	1	..	1	..	..	30	..	30	28	6	11
Plasnewydd Road	44	2	..	2	..	..	46	..	44	43	11	19
Rose Street	47	6	..	6	..	..	47	..	47	47	7	10
Elm Street	50	1	1	2	..	..	51	..	50	44	16	31

ADAMSDOWN WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seulery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Cumrae Street	24	..	..	1	19	..	24	..	24	24	..	15
Kingarth Street	22	..	..	1	16	..	22	..	22	22	..	13
Adamsdown Place	20	..	..	..	..	..	20	..	20	20	..	..
Cumnock Terrace	10	..	..	3	10	..	10	..	10	10	..	3
Adam Street	86	..	2	..	1	..	91	..	89	61	..	9
Prince Leopold Street	28	3	2	5	2	..	28	..	28	28	6	11
Clyde Street	24	4	..	5	4	..	24	..	24	24	8	10
Garesfield Street	2	1	..	1	1	..	2	..	2	2	2	2
Inchmarnock Street	31	..	..	2	24	..	31	..	31	31	..	3
Kilcattan Street	33	..	..	..	30	..	33	..	33	33	..	..
Kerrycrov Street	33	..	..	..	31	..	33	..	33	33	..	..
Ascog Street	34	..	..	1	30	..	34	..	34	34	..	..
Lady Margaret Terrace	24	..	..	2	13	..	24	..	24	24	..	2
Gwendoline Street	17	..	..	1	17	..	17	..	17	17	..	..
Moir Place	30	..	..	1	..	..	34	..	29	25	5	5
North Luton Place	24	1	1	..	2	..	24	..	24	22	3	5
West " "	6	1	..	..	2	..	7	..	6	3	1	4
South " "	28	1	..	..	1	..	28	..	28	25	1	1
Sanquahar Street	31	..	..	2	16	3	33	..	32	21	..	2
Morgan Street	22	..	1	1	..	..	22	..	22	22	1	9
Garth Street	18	..	..	2	..	..	16	..	16	15	..	4
Garth Court	5	..	1	..	..	..	5	..	5	..	4	..
Duffryn Street	20	..	..	1	1	..	18	..	18	18	2	6
South Terrace	6	..	..	..	..	..	6	..	6	6	..	2
Pellett Street	23	..	..	1	..	..	22	..	22	22	1	7
Cumnock Place	15	..	..	..	3	..	15	..	15	15	..	6
Noah Street	7	..	..	..	..	..	7	..	7	3	..	4
Godfrey Street	11	..	1	1	..	..	11	..	11	11	..	3
Taff Street	13	..	1	..	..	..	11	..	11	11	..	3
Davis Street	17	..	..	1	..	..	17	..	17	17	..	3
Victoria Street	25	..	..	2	1	..	25	..	25	25	..	10
Ivor Street	21	..	..	1	..	..	21	..	21	20	..	9

RIVERSIDE WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seulery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Wellington Street	97	6	..	9	2	..	99	..	97	86	20	23
William Street	4	..	..	..	..	..	4	..	4	4	..	..
Mortimer Road	13	1	..	2	..	..	13	..	13	11	..	..
Pontcanna Terrace	12	..	..	..	..	..	12	..	12	12	..	..
Halket Street	52	9	1	2	6	..	45	..	45	44	14	21
Lewis Street	39	3	1	4	9	..	39	..	39	39	7	12
Wyndham Street	41	4	1	3	4	..	41	..	41	41	4	..

CANTON WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seulery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Albert Street	101	11	3	7	1	..	101	..	101	101	18	45
Egerton Street	50	6	..	1	12	..	50	..	50	50	15	21
Thornhill Street	14	..	..	..	..	..	14	..	14	14	3	5
William Street	2	..	..	..	..	..	2	..	2	2	..	..
Mortimer Road	37	2	..	2	..	..	37	..	37	33	5	..
Pontcanna Place	23	1	..	2	..	..	23	..	23	22	..	..
Wellington Street	52	2	..	1	4	..	52	..	52	51	13	17

ROATH WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seulery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Nora Street	76	3	3	4	1	..	77	..	76	73	..	40
Helen Street	78	6	3	5	2	..	78	..	78	78	31	38
Pearl Street	205	14	2	10	2	..	207	..	205	196	28	53
Splot Road	4	..	..	..	..	..	4	..	4	3	..	1
Pearl Place	7	..	..	..	..	..	7	..	7	4	..	1
Shakespeare Street	5	..	..	..	..	..	5	..	5	5	1	1
Croft Street	23	2	..	1	1	..	25	..	21	20	..	11
Elm Street	47	1	..	3	..	..	48	..	48	36	8	9
Cottrell Road	80	4	..	4	1	..	80	..	80	55	2	11
Woodcock Street	10	..	..	..	..	..	10	..	10	10	5	1
Snipe Street	13	..	..	1	..	..	16	..	10	10	..	..
Cyfarthfa Street	20	2	1	2	..	..	20	..	20	19	4	1
Teal Street	5	1	..	1	..	..	5	..	5	5	2	1
Grouse Street	10	..	..	..	..	..	10	..	10	10	4	3
Oakfield Street and Cottage ..	69	7	2	3	6	2	137	3	4	25	..	8

GRANGE WARD

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seultery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Wedmore Road	57	..	..	..	1	..	57	..	37	9	..	24
Rutland Street	34	5	..	1	1	..	34	..	34	34	3	5
Thomas Street	45	4	..	5	..	..	45	..	44	44	8	..
North Street	10	..	..	..	..	..	9	..	9	9	1	1
Madras Street,	26	4	..	3	4	..	26	..	26	26	4	15
Bishop Street	20	..	1	2	1	..	20	..	20	18	..	1
Lucknow Street	12	..	..	2	..	..	13	..	12	12	2	7
Holmesdale Street ..	90	4	3	5	1	..	91	..	90	79	..	2
Cymmer Street	32	..	..	..	..	..	64	..	..	..	32	..

SPLOT WARD.

NAME OF STREET.	Number of Houses Inspected.	Defective Drains.	Choked Drains.	Defective W.C.	Defective Traps.	Seultery Sinks connected direct with Drain.	Number of Water Closets.	Inside Closets not ventilated.	Outside Water Closets not ventilated.	Outside Closets not supplied with Water.	Dampness of Premises.	Other Nuisances.
Portmanmoor Road ..	143	9	1	3	1	..	144	..	143	98	..	73
Gwendoline Street ..	13	..	..	..	7	..	13	..	13	13	..	..
Sanquahar Street ..	20	..	..	..	13	..	20	..	20	20	..	..
Bridgend Street	59	..	..	5	..	..	41	..	41	24	1	30
Howard Place.. ..	9	..	..	2	9	..	9	..	9	9	..	3
Howard Street	26	..	..	1	19	..	26	..	26	26	..	21

INSPECTION OF COMMON LODGING HOUSES.—These houses are regulated by the provisions of the Public Health Act, 1875. Section 77 requires all Common Lodging Houses to be registered, and Section 80 empowers the Sanitary Authority to make Bye-Laws.

- (1) For fixing and from time to time varying the number of lodgers who may be received into a Common Lodging House, and for the separation of the sexes therein.
- (2) For promoting cleanliness and ventilation in such houses.
- (3) For the giving of notices and the taking precautions in the case of any infectious diseases; and
- (4) Generally for the well ordering of such houses.

In the year 1891 your Authority adopted Bye-Laws which correspond closely with the "Model Bye-Laws" of the Local Government Board.

COMMON LODGING HOUSES.

Inspection of Common Lodging Houses.							Number.
Total number on register...	...	...	...	...	...	...	30
Registered rooms	...	...	...	...	...	...	120
Number of persons certified to accommodate...	...	...	...	...	...	...	389
Day inspections...	...	...	...	...	...	...	1,949
Night inspections	...	...	...	...	...	...	120
W.C.'s cleansed and repaired	...	...	...	...	...	...	42
Drains trapped and repaired	...	...	...	...	...	...	38
Special ventilation provided to rooms	...	...	...	...	...	...	28
Limewashed	...	...	...	...	...	...	61
Repaired	...	...	...	...	...	...	60
Accumulations removed	...	...	...	...	...	...	33

SEAMEN'S LODGING HOUSES.

Total number of applications	...	...	...	...	...	...	606
" " persons licensed	...	...	...	...	...	...	128
" " houses, the occupiers of which have been licensed	...	...	...	...	...	...	129
Maximum number of lodgers authorised to be received in the above	...	...	...	...	...	...	1,207
Number of day inspections	...	...	...	...	...	...	2,627
" night inspections	...	...	...	...	...	...	196
" houses in which sanitary improvements have been effected	...	...	...	...	...	...	70

Nature of Sanitary Defects—

W.C.'s supplied with water	...	...	...	...	...	...	26
Defective water closets	...	...	...	...	...	...	67
Defective drains	...	...	...	...	...	...	67
Defective paving in yards	...	...	...	...	...	...	79
Defective bedroom ventilation	...	...	...	...	...	...	64
Houses with walls and roofs out of repair	...	...	...	...	...	...	62
Houses limewashed	...	...	...	...	...	...	324
Accumulations of refuse	...	...	...	...	...	...	28
Infectious disease discovered	...	...	...	...	...	...	7
Legal proceedings taken	...	...	...	...	...	...	8

SALE OF FOOD AND DRUGS ACT.

The following Table shows the number of samples of Food and Drugs submitted during the year 1903 to the Public Analyst, Mr. Thomas Hughes, F.I.C., F.C.S. :—

Samples obtained.	Number of Samples.	Number of Genuine Samples.	Number of Samples Adulterated.	Fines.
Milk	443	429	14	£5, £10, £2, £3, £3, £4, £20, £2, £4. 1 case no action taken, 3 cases withdrawn. 1 case fined costs.
Baking Powder ...	2	2	—	
Rice	1	1	—	
Pepper	2	2	—	
Arrowroot	1	1	—	
Demerara Sugar ...	7	7	—	
Coffee... ..	8	8	—	
Mustard	1	1	—	
Corn Flour	4	4	—	
Sago	1	1	—	
Ginger	8	8	—	
Tea	2	2	—	
Bicarbonate of Soda...	3	3	—	
Flour... ..	11	11	—	
Beer	22	22	—	
Butter	25	24	1	£5 and costs.
Margarine	19	19	—	
Bread... ..	5	5	—	
Marmalade	2	2	—	
Jam	2	2	—	
Lard	2	2	—	
Sweets	5	5	—	
Golden Syrup	2	2	—	
Cheese	2	2	—	
Condensed Milk ...	1	1	—	
Sweet Spirits of Nitre	1	1	—	
Rum	3	3	—	
Irish Whiskey ...	3	3	—	
Gin	3	3	—	
Brandy	3	3	—	
Scotch Whiskey ...	3	3	—	
Tartaric Acid	1	1	—	
Skimmed Milk	2	2	—	
Total	600	585	15	£58 and costs.

**Report to the Medical Officer of Health of Mr. D. Vaughan, Chief
Inspector of Nuisances and Inspector of Canal Boats, 1903:—**

NUISANCES :—

Nuisances inspected	...	...	...	...	...	4,261
Notices issued	...	...	...	...	...	3,537
Nuisances abated without legal proceedings	...	...	...	...	...	4,261
" with "	...	...	...	...	...	—
Animals kept so as to be a nuisance	...	...	...	...	...	54
Injurious and foul accumulations	...	...	...	...	...	345
Nuisances from smoke	...	...	...	...	...	9
Stagnant water in cellars, &c.	...	...	...	...	...	45
Stagnant water around gullies	...	...	...	...	...	9
Defective drainage	...	...	...	...	...	800
Drains unstopped and cleansed	...	...	...	...	...	356
" trapped and repaired	...	...	...	...	...	327
" tested	...	...	...	...	...	567
" found defective	...	...	...	...	...	300
Foul and offensive W.C.'s cleansed	...	...	...	...	...	87
Defective apparatus to water-closets repaired	...	...	...	...	...	34
Water laid on to water-closets	...	...	...	...	...	20
" " urinals	...	...	...	...	...	29
" " dwelling-houses	...	...	...	...	...	48
Insufficient ventilation	...	...	...	...	...	7
Overcrowding notices	...	...	...	...	...	13
Dilapidated houses repaired	...	...	...	...	...	1,199
Dirty houses and workshops cleansed and lime-washed	...	...	...	...	...	124
Insufficient W.C. accommodation	...	...	...	...	...	15
Percolation of water into cellar	...	...	...	...	...	4
Remove covering over open space	...	...	...	...	...	1
Stable used as dwelling	...	...	...	...	...	1
Cellar	...	...	...	...	...	1

DISINFECTION :—

Houses disinfected	...	...	...	...	1,378
Articles of bedding and clothing disinfected	18,643
" " " destroyed	819

OFFENSIVE TRADES :—

Premises visited...	1,172
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SLAUGHTER HOUSES AND MARKETS :—

Visits paid to slaughter houses	150
" " markets	300
Butchers and Provision Shops inspected...	...	...	...	...	4,890

COWSHEDS, MILKSHOPS AND DAIRIES :—

Number of Cowkeepers on Register	...	...	...	...	21
" Milk sellers	...	...	...	...	615
Total	...	...	...	...	<u>636</u>

Number of Cowkeepers registered during the year	...	...	...	...	—
" Milk sellers registered during the year	...	...	...	...	113
					<u>113</u>

Number of visits paid to cowsheds	...	...	...	...	...	234
" " " milkshops	...	...	...	...	...	1,313
Notices served ...	...	...	...	...	...	50
						<u>1,597</u>

COWSHEDS, MILKSHOPS, AND DAIRIES.

PARTICULARS OF INSPECTION.	COWSHEDS.	MILKSHOPS.
Total number of inspections	234	1313
Found in good condition	230	1257
Water closets, sinks, or drains defective	1	19
Receptacles for manure erected	...	...
Yards badly paved and accumulation of rubbish	3	27
Dairies or milkshops used for purposes incompatible with proper preservation of milk	...	...
Infectious disease amongst persons employed	...	10
Cowsheds with defective lighting, cleansing, ventilating of air space, and lime washing	...	...
Cowsheds overcrowded	...	...

CANAL BOATS.

Number of Boats on Register	...	...	...	...	30
" Inspections	...	...	...	...	69
" Boats found in good condition	...	...	...	...	53
" " found with defective ventilators	...	...	...	...	10
Water vessels defective	...	...	...	...	4
Defective chimney	...	...	...	...	2
Verbal notices served and complied with	...	...	...	...	16

MAGISTERIAL PROCEEDINGS.

	NUMBER OF CASES.	FINES.
		£ s. d.
Proceedings under Sale of Food and Drugs Act	15	58 0 0
" " Seamen's Bye Laws	9	27 12 0
" " Cowsheds and Milkshops Order	1	0 5 0
" " Public Health Act, 1875	6	12 10 0
" " Towns Police Clauses Act (Sec. 31)	50	5 6 0
Total	81	£103 13 0

I have the honor to be, Gentlemen,

Your obedient Servant,

EDWARD WALFORD,

MEDICAL OFFICER OF HEALTH.

APPENDIX.

TABLE I.—LOCAL GOVERNMENT BOARD TABLE.
VITAL STATISTICS OF WHOLE DISTRICT DURING 1903 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.		
		Number.	Rate. *	Under 1 Year of Age.		At all Ages.				Number.	Rate. *	
				Number.	Rate per 1,000 Births registered.	Number.	Rate. *					
1	2	3	4	5	6	7	8	9	10	11	12	13
1893	136,168	5,110	37.5	918	179	2,794	20.4	332	..	..	2,794	20.4
1894	139,519	5,100	36.5	722	141	2,415	17.3	263	..	..	2,415	17.3
1895	142,938	5,321	37.1	951	179	2,840	19.9	342	..	..	2,840	19.9
1896	146,479	5,591	38.1	923	165	2,826	19.2	364	31	..	2,795	19.0
1897	150,087	5,279	35.1	796	151	2,568	17.1	303	34	..	2,534	16.8
1898	153,753	5,520	35.9	870	158	2,684	17.4	312	57	..	2,627	17.0
1899	157,414	5,309	33.7	976	184	2,961	18.7	321	93	..	2,858	18.1
1900	161,452	5,198	32.2	730	141	2,745	17.0	314	78	..	2,667	16.5
1901	165,308	5,206	31.4	775	148	2,671	16.1	352	75	57	2,653	16.0
1902	168,909	5,378	31.2	769	145	2,909	17.2	486	88	44	2,865	16.9
Averages for years 1893-1902.	152,204	5,291	35.1	843	159	2,740	18.0	338	..	..	2,705	17.7
1903	172,598	5,250	30.4	645	122	2,503	14.5	487	96	89	2,496	14.4

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

TABLE II.—LOCAL GOVERNMENT BOARD TABLE.
VITAL STATISTICS OF SEPARATE LOCALITIES IN 1903 AND PREVIOUS YEARS.

NAMES OF LOCALITIES.	COUNTY BOROUGH OF CARDIFF. (Whole District.)				EAST CARDIFF. Registration Sub-District.				CENTRAL CARDIFF. Registration Sub-District.				WEST CARDIFF. Registration Sub-District.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
1893 ..	136,168	5,110	2,794	918												
1894 ..	139,519	5,100	2,415	722												
1895 ..	142,958	5,321	2,840	951												
1896 ..	146,479	5,591	2,795	923												
1897 ..	150,087	5,279	2,534	796	45,282	1,736	643	240	54,184	1,528	909	250	50,051	2,015	982	306
1898 ..	153,783	5,520	2,627	870	47,124	1,821	714	288	54,217	1,610	924	279	51,921	2,089	989	303
1899 ..	157,414	5,309	2,858	976	49,040	1,750	753	307	54,300	1,617	1,009	308	53,861	1,942	1,096	361
1900 ..	161,452	5,198	2,667	730	51,035	1,658	755	214	54,358	1,510	907	229	55,874	2,030	1,005	287
1901 ..	165,308	5,206	2,653	775	53,111	1,667	668	226	54,402	1,572	912	255	57,962	1,967	1,073	294
1902 ..	168,909	5,278	2,865	769	56,613	1,694	733	241	54,541	1,624	1,010	230	60,476	1,960	1,122	298
Averages of Years 1893 to 1902.	152,204	5,291	2,704	843												
1903 ..	172,598	5,250	2,496	645	57,013	1,643	633	194	54,299	1,561	853	206	61,339	2,046	1,010	245

LOCAL GOVERNMENT BOARD TABLE.

TABLE III.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1903.

NOTIFIABLE DISEASE.		CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.			NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.				
		At all Ages.	At Ages—Years.					East Cardiff Registration Sub.-Dist.	Central Cardiff Registration Sub.-Dist.	West Cardiff Registration Sub.-Dist.	East Cardiff Registration Sub.-Dist.	Central Cardiff Registration Sub.-Dist.	West Cardiff Registration Sub.-Dist.		
			Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.							65 and upwards.	
Small-pox	..	65	..	5	5	13	39	3	22	13	30	22	11	30	30
Cholera
Diphtheria	..	431	12	114	196	56	53	..	119	121	191	65	71	88	88
Membranous Croup	..	7	..	5	2	..	..	..	1	..	6	..	..	..	..
Erysipelas	..	145	4	3	9	9	109	11	57	46	42	..	..	..	..
Scarlet Fever	..	963	29	276	538	87	33	..	178	450	335	96	291	223	223
Typhus Fever	..	6	..	..	4	..	2	..	..	4	2	..	4	2	2
Enteric Fever	..	100	1	3	32	29	35	..	22	33	45	18	22	36	36
Relapsing Fever
Continued Fever	..	5	..	..	3	..	2	..	1	..	4	..	..	..	..
Puerperal Fever	..	20	..	..	..	3	17	..	4	6	10	..	..	..	..
Plague
Totals	..	1,742	46	406	789	197	290	14	404	673	665	201	399	379	379

LOCAL GOVERNMENT BOARD TABLE.

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1903.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBLINED AGES.							Deaths in or belonging to Localities (at all Ages).			Total Deaths in Public Institutions in the District.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards.	East Cardiff Reg. Sub-dis.	Central Cardiff Reg. Sub-dis.	West Cardiff Reg. Sub-dis.	
Small Pox	3	..	..	..	..	3	..	..	..	3	4
Measles	27	11	15	1	..	..	..	6	8	13	2
Scarlet Fever	32	2	15	11	1	3	..	5	10	17	14
Whooping-cough	37	19	16	2	..	..	..	13	14	10	1
Diphtheria and Membranous Croup	36	2	24	8	2	..	..	8	7	21	14
Croup	2	..	1	1	..	..	..	..	..	2	..
Fever { Typhus	1	..	..	..	..	1	..	..	..	1	1
Enteric	14	..	..	4	2	8	..	..	4	10	14
Other continued .. .. .	..	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	15	2	1	1	1	6	4	6	5	4	..
Cholera .. .. .	..	..	..	..	..	..	..	..	..	..	..
Plague .. .. .	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	82	61	11	..	1	5	4	20	20	42	8
Enteritis	31	23	1	..	1	5	1	14	8	9	3
Puerperal Fever	7	..	..	..	..	7	..	..	3	4	1
Erysipelas	7	3	..	..	..	2	2	1	3	3	2
Other Septic Diseases	16	7	..	3	1	4	1	5	5	6	3
Phthisis	217	1	4	10	47	152	3	46	78	93	54
Other Tubercular Diseases	93	32	25	13	7	16	..	22	23	48	11
Cancer, Malignant Disease	105	..	..	..	1	75	29	25	29	51	41
Bronchitis	163	56	14	2	..	51	40	49	53	61	17
Pneumonia	226	61	55	8	8	77	17	70	69	87	24
Pleurisy	8	2	..	1	2	2	1	..	2	6	1
Other Diseases of Respiratory Organs	15	4	..	1	..	9	1	8	3	4	1
Alcoholism	17	..	..	..	..	15	2	6	4	7	2
Cirrhosis of Liver .. .. .	..	..	..	..	..	..	..	..	..	..	..
Venereal Diseases	22	9	1	..	..	7	5	6	9	7	14
Premature Birth	73	73	..	..	..	..	..	15	29	29	9
Diseases and Accidents of Parturition	16	..	..	..	3	13	..	6	6	4	..
Heart Diseases	267	8	1	10	12	145	91	64	75	128	39
Accidents	87	5	10	6	11	47	8	11	54	22	42
Suicides	20	..	..	..	1	18	1	2	11	7	3
General Paralysis	24	..	..	..	..	24	..	6	12	6	..
Other Forms of Insanity	9	..	..	..	..	9	..	3	2	4	..
All other Causes	824	264	51	35	26	230	218	216	307	301	162
All Causes	2,496	645	245	117	127	934	428	633	853	1,010	487

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1903.

MONTH	Attached Thermometer.	Barometer. Inches.	TEMPERATURE IN SHADE.								HYGROMETER.			RAINFALL.				DEATH-RATE per 1,000.	
			Maximum.	Minimum.	Mean of Maximum.	Mean of Minimum.	Mean of Month.	Earth.		Dry Bulb Mean.	Wet Bulb Mean.	Relative Humidity.	Amount in Inches.	Greatest Fall in 24 hours.	Date of Greatest Fall.	Days on which fell or more rain fell.	All Causes.	Zymotic Chief Diseases.	
								1 foot mean.	4 feet mean.										
January	..	57	54.2	20.0	45.5	35.5	40.5	42.1	44.6	40.7	39.9	94	5.81	1.69	4th	24	17.9	2.0	
February	..	56	60.0	29.0	50.5	39.8	45.1	44.9	47.7	45.0	43.5	88	2.19	0.48	24th	20	15.1	0.9	
March	..	59	63.0	30.0	51.8	40.0	45.9	46.0	48.3	47.8	44.2	75	5.80	0.65	1st	26	14.1	0.9	
April	..	57	59.2	26.2	52.3	36.8	44.5	44.7	49.7	45.8	43.3	76	2.48	0.75	25th	16	12.6	0.9	
May	..	60	76.2	33.0	60.8	45.2	58.0	53.0	52.1	54.3	50.0	73	4.18	1.39	8th	21	12.5	0.8	
June	..	60	81.0	36.5	63.0	46.8	54.9	54.6	55.8	56.8	52.5	75	3.11	0.90	9th	15	13.1	0.6	
July	..	64	80.5	41.0	64.4	49.5	56.9	61.0	58.4	61.0	56.6	74	3.53	1.06	17th	16	12.2	0.6	
August	..	63	73.0	42.0	65.3	50.9	58.1	60.5	59.3	59.0	55.9	82	5.84	0.72	23rd	26	11.1	1.7	
September	..	60	68.8	36.2	62.9	48.7	55.8	58.4	56.6	55.4	54.5	94	3.73	0.92	28th	21	12.6	2.8	
October	..	58	64.5	31.0	57.9	46.4	52.1	57.5	57.9	52.7	50.4	85	11.06	2.16	14th	31	13.7	1.4	
November	..	56	56.8	26.0	51.1	50.7	50.4	48.0	53.9	44.9	43.0	83	2.40	0.53	27th	19	14.1	1.5	
December	..	55	52.0	23.0	43.7	34.4	39.0	43.0	49.8	39.5	38.2	90	4.24	0.69	8th	21	17.1	1.4	

66.92 52.47
 55.8 45.1
 43.7
 199.5
 190.7

Mean Temperature of Each Month in the Year, during the Ten Years 1894-1903.

MONTH.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
January	39°4	35°5	41°6	35°9	44°0	42°2	36°5	37°9	36°5	40°5
February	43°0	29°3	40°8	43°5	41°3	41°3	39°8	37°8	36°1	45°1
March	44°4	41°6	45°9	44°6	41°1	42°1	38°3	40°6	43°8	45°9
April	47°0	47°9	48°0	46°3	46°6	47°2	46°6	46°9	42°7	44°5
May	49°7	54°4	52°9	49°1	49°9	52°0	50°4	53°5	48°8	58°0
June	57°1	58°5	61°4	59°5	55°9	59°8	55°3	57°3	56°8	54°9
July	60°3	60°0	61°4	62°7	60°6	63°8	63°9	64°2	58°8	56°9
August	57°5	59°0	58°6	60°9	61°5	68°3	59°8	60°0	58°7	58°1
September	53°2	59°7	56°8	54°4	58°8	57°8	55°5	57°7	55°2	55°8
October	50°3	46°7	46°2	51°2	52°7	48°9	49°1	49°7	50°1	52°1
November	47°2	47°2	39°9	46°1	45°7	47°0	44°5	41°5	43°3	50°4
December.. .. .	41°8	40°0	40°0	42°5	46°7	37°3	43°5	40°9	40°2	39°0

The following Table illustrates the Daily Direction of Wind throughout the Year 1903.

Direction of Wind.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year 1903
N... .. .	1	1	..	1	..	..	..	..	2	..	..	..	5
N.E.	10	17	3	6	10	19	1	..	10	..	5	14	95
N.W.	6	5	5	7	4	2	..	2	3	2	4	..	40
S. .. .. .	..	1	4	3	2	..	..	..	..	1	..	..	11
S.E.	3	..	4	3	7	..	4	4	7	3	1	8	44
S.W.	9	3	13	3	7	6	25	22	7	25	17	9	146
E.	1	..	..	1	..	3	..	..	1	..	..	..	6
W.	1	1	2	6	1	..	1	3	..	..	3	..	18

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-EIGHT YEARS, 1876-1903.

YEAR.	JANUARY.				FEBRUARY.				MARCH.			
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	12	0.68	2nd	5.23	22	0.90	14th	3.92	22	0.54	9th
1877	5.77	27	0.72	3rd	2.79	20	0.42	11th	2.66	21	0.55	23rd
1878	1.73	17	0.36	27th	3.07	16	0.87	27th	1.25	8	0.40	28th
1879	5.95	10	1.30	1st	5.95	23	0.86	20th	1.14	14	0.32	23rd
1880	0.87	11	0.42	13th	3.88	22	1.06	18th	1.90	12	0.75	2nd
1881	0.92	12	0.23	26th	4.81	15	1.12	9th	3.88	16	0.68	3rd
1882	3.19	13	0.82	2nd	2.56	15	0.60	28th	2.36	19	0.32	1st
1883	5.75	25	1.11	24th	3.73	20	0.65	10th	0.60	10	0.12	19th
1884	6.03	21	0.99	31st	4.40	22	1.35	17th	3.39	16	1.27	3rd
1885	3.71	20	0.58	9th	3.65	22	0.67	26th	1.87	16	0.53	29th
1886	5.03	23	0.91	30th	1.32	11	0.62	28th	3.97	13	0.68	20th
1887	2.76	15	0.73	7th	1.45	6	0.73	3rd	3.21	10	1.16	15th
1888	1.70	12	0.49	1st	1.07	9	1.09	2nd	4.62	15	0.76	24th
1889	1.58	10	0.58	9th	2.00	16	0.64	10th	3.89	16	1.17	8th
1890	5.21	24	0.61	26th	0.55	7	0.22	19th	1.52	14	0.28	24th
1891	3.58	13	1.26	23rd	0.05	2	0.03	2nd	1.76	16	0.31	15th
1892	2.10	15	0.70	16th	2.38	19	0.58	20th	1.18	6	0.48	15th
1893	2.38	19	0.94	12th	6.04	22	0.95	25th	0.31	6	0.14	2nd
1894	3.20	23	0.44	19th	3.68	20	0.78	17th	3.37	13	0.82	1st
1895	3.88	20	0.71	19th	0.17	4	0.08	24th	3.92	21	0.86	27th
1896	0.64	6	0.40	24th	1.39	9	0.80	13th	4.47	24	0.54	7th
1897	3.78	17	0.50	31st	5.73	21	0.70	4th	6.29	19	0.90	21st
1898	1.96	10	0.48	10th	1.71	17	0.22	18th	1.12	9	0.53	6th
1899	5.50	20	1.03	20th	5.89	13	0.79	4th	1.39	6	0.88	25th
1900	5.81	23	1.26	6th	6.40	20	0.99	18th	1.06	6	0.33	21st
1901	2.48	17	0.59	26th	1.01	10	0.25	26th	2.10	12	0.31	6th
1902	2.60	18	0.72	3rd	1.25	9	0.40	22nd	2.58	13	0.54	14th
1903	5.81	24	1.69	4th	2.19	20	0.48	24th	5.80	26	0.65	1st

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-EIGHT YEARS, 1876-1903.

YEAR.	APRIL.				MAY.				JUNE.			
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	17	0.38	28th	0.23	4	0.12	24th	1.91	9	0.52	15th
1877	2.90	20	0.52	20th	2.47	14	0.99	16th	1.48	12	0.41	1st
1878	4.10	21	0.75	9th	4.32	24	0.71	16th	3.68	15	1.05	16th
1879	2.64	17	0.73	19th	2.85	15	0.88	29th	6.48	23	1.64	30th
1880	1.98	13	0.40	5th	1.45	11	0.46	26th	2.38	19	0.53	17th
1881	1.44	7	0.60	13th	2.62	10	1.73	17th	3.59	18	0.63	16th
1882	5.68	20	0.60	12th	2.72	13	0.59	22nd	4.28	20	0.82	5th
1883	0.67	7	0.28	26th	1.90	12	0.70	11th	1.81	17	1.16	27th
1884	1.56	11	0.43	3rd	2.37	14	0.80	2nd	1.92	9	1.11	28th
1885	2.52	16	0.67	1st	3.86	27	0.71	19th	2.61	13	1.04	23rd
1886	2.98	15	0.73	7th	6.38	19	1.52	31st	0.70	7	0.28	1st
1887	1.63	10	0.45	26th	1.94	14	0.63	19th	0.60	4	0.51	2nd
1888	1.48	13	0.30	17th	1.69	8	0.40	17th	3.69	17	0.74	17th
1889	3.54	18	0.71	30th	2.51	16	0.38	31st	0.58	6	0.41	1st
1890	1.80	14	0.34	6th	1.99	13	0.66	9th	2.46	17	0.40	10th
1891	2.02	11	0.40	2nd	3.41	17	0.75	21st	2.47	12	1.30	24th
1892	1.37	9	0.43	20th	1.35	11	0.66	27th	1.93	10	0.61	28th
1893	0.29	5	0.16	1st	2.80	12	0.72	19th	0.67	9	0.23	22nd
1894	2.05	15	0.41	23rd	2.18	15	0.50	15th	2.43	16	0.64	3rd
1895	2.08	12	0.55	24th	0.50	3	0.41	31st	1.15	9	0.32	30th
1896	2.83	14	0.80	15th	9.22	3	0.14	13th	2.48	11	1.00	7th
1897	8.18	20	0.90	13th	2.29	8	0.50	29th	5.02	11	0.90	8th
1898	1.40	10	0.28	11th	4.80	20	0.80	11th	5.06	14	0.90	4th
1899	4.34	18	0.92	20th	2.49	12	0.78	19th	1.17	5	0.45	30th
1900	1.62	12	0.42	3rd	1.89	13	0.37	21st	1.73	14	0.27	14th
1901	4.94	14	0.91	3rd	0.91	5	0.42	30th	3.00	9	1.22	20th
1902	2.36	9	0.54	4th & 14th	2.43	21	0.55	16th	2.86	20	0.45	12th
1903	2.48	16	0.75	25th	4.48	21	1.39	8th	3.11	15	0.90	9th

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-EIGHT YEARS, 1876—1903.

YEAR.	JULY.				AUGUST.				SEPTEMBER.			
	Rainfall in Month, Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month, Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month, Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.
1876	1.91	10	0.41	6th	6.06	27	2.72	19th	7.08	19	1.38	30th
1877	4.94	18	1.27	14th	5.70	21	1.42	27th	3.25	8	1.39	27th
1878	2.01	9	0.78	23rd	10.82	22	3.64	15th	3.21	9	1.38	22nd
1879	4.00	21	0.81	19th	8.12	24	1.34	27th	4.85	17	0.69	7th
1880	6.64	23	0.95	17th	0.77	7	0.27	2nd	3.67	15	0.77	17th
1881	2.62	15	0.77	30th	6.94	20	1.45	22nd	2.09	13	0.48	22nd
1882	5.77	24	0.84	6th	6.75	16	1.14	22nd	3.94	17	0.79	28th
1883	3.56	21	0.82	20th	2.09	16	0.73	8th	6.14	19	1.03	23rd
1884	4.05	20	0.94	23rd	2.21	9	0.84	31st	1.96	15	0.64	21st
1885	0.72	6	0.31	18th	2.74	12	1.07	6th	6.51	23	1.76	10th
1886	4.85	17	0.71	29th	1.68	9	0.44	9th	4.08	14	0.75	4th
1887	1.51	13	0.85	26th	2.88	11	1.02	16th	4.07	17	1.24	1st
1888	6.83	25	1.16	7th	3.50	17	0.74	29th	1.21	8	0.52	27th
1889	3.85	12	1.16	9th	3.90	15	0.65	2nd	2.09	9	1.53	23rd
1890	3.57	19	0.73	17th	3.95	20	0.95	9th	1.57	11	0.50	17th
1891	2.21	17	0.36	2nd	7.19	22	1.10	26th	2.43	19	0.51	3rd
1892	3.83	9	1.50	12th	4.64	16	1.62	27th	3.95	14	1.38	29th
1893	3.88	17	0.80	10th	3.05	14	0.52	20th	2.03	15	0.89	28th
1894	4.22	20	0.97	24th	4.55	18	1.55	25th	2.22	10	0.80	22nd
1895	4.71	15	0.94	23rd	4.08	17	1.19	12th	1.17	10	0.40	6th
1896	1.14	8	0.35	24th	2.89	15	0.84	19th	7.34	23	1.10	17th
1897	2.51	8	0.80	6th	5.42	16	1.30	30th	6.37	13	1.38	29th
1898	0.40	2	0.20	1st	3.48	10	0.67	6th	1.94	4	1.38	29th
1899	0.32	6	0.09	1st	1.74	7	0.56	29th	2.50	13	0.74	26th
1900	0.68	8	0.27	27th	4.06	14	0.88	9th	1.32	10	0.50	26th
1901	2.58	8	1.00	23rd	4.00	14	1.30	13th	4.36	17	1.52	13th
1902	2.19	15	0.77	19th	4.21	23	0.68	14th	3.13	15	0.86	10th
1903	3.53	16	1.06	17th	5.84	26	0.72	23rd	3.73	21	0.92	28th

TABLE SHOWING RAINFALL AT CARDIFF IN EACH MONTH, DURING THE TWENTY-EIGHT YEARS, 1876-1903.

YEAR.	OCTOBER.				NOVEMBER.				DECEMBER.				YEAR.
	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	Rainfall in Month. Inches.	Days on which 0.01 or more rain fell.	Greatest fall in 24 hours.	Date of greatest fall.	
1876	3.84	17	0.62	16th	5.27	18	0.75	12th	7.13	23	0.80	17th	46.62
1877	4.89	16	1.15	24th	6.54	25	1.06	24th	3.40	25	0.88	28th	46.79
1878	5.76	18	1.09	23rd	5.76	13	0.84	9th	2.70	10	0.75	28th	45.71
1879	1.51	12	0.35	19th	0.43	8	0.18	20th	2.11	9	0.79	31st	44.79
1880	4.94	15	1.45	25th	3.67	15	0.90	15th	6.70	20	1.09	14th	38.85
1881	3.23	13	0.72	22nd	4.98	23	0.65	26th	4.50	45	1.77	7th	41.62
1882	8.33	23	1.64	23rd	6.26	21	0.90	7th	4.86	25	0.73	31st	56.60
1883	4.23	17	0.61	15th	6.38	24	0.80	21st	1.92	17	0.57	10th	38.78
1884	1.01	17	0.35	8th	2.12	16	0.47	30th	5.87	20	0.68	5th	36.89
1885	5.59	22	1.60	22nd	5.47	16	1.11	27th	1.74	17	0.05	5th	40.99
1886	5.09	21	0.87	16th	5.39	21	1.03	5th	6.64	21	1.33	26th	48.11
1887	2.80	13	1.14	28th	3.48	21	0.69	3rd	3.46	20	0.75	12th	39.79
1888	1.74	11	0.52	28th	7.04	26	1.13	12th	3.61	16	0.88	27th	38.18
1889	3.77	25	0.48	8th	1.87	12	0.75	24th	2.40	14	0.80	21st	31.38
1890	1.92	16	0.41	7th	3.89	20	0.67	6th	0.80	4	0.32	18th	29.23
1891	7.12	22	1.32	18th	3.91	15	0.74	28th	6.19	19	0.78	30th	42.34
1892	2.64	15	0.51	27th	3.25	18	0.66	4th	2.23	12	0.62	1st	29.63
1893	5.98	21	1.29	4th	2.30	13	0.58	1st	4.18	19	0.94	12th	33.91
1894	4.91	14	1.05	24th	4.72	20	0.83	13th	3.66	20	0.51	17th	41.19
1895	3.67	15	0.94	3rd	4.21	23	0.60	5th	3.45	31	0.48	17th	32.64
1896	4.65	19	0.74	5th	0.96	5	0.60	15th	6.41	22	0.72	4th	35.42
1897	3.22	7	0.90	2nd	1.82	7	0.63	27th	6.06	18	1.19	7th	56.80
1898	7.30	18	1.13	17th	7.46	16	1.39	23rd	5.44	17	1.03	6th	42.07
1899	2.34	12	0.60	27th	3.29	11	0.95	9th	3.69	19	0.86	28th	32.75
1900	5.79	21	1.06	29th	4.99	22	0.71	24th	6.55	26	1.06	30th	41.90
1901	2.64	21	0.37	1st	1.50	8	0.51	11th	7.15	21	0.99	7th & 28th	36.27
1902	3.88	21	0.96	21st	4.97	20	1.30	8th	3.95	18	0.83	28th	36.41
1903	11.06	31	2.16	14th	2.40	19	0.53	27th	4.24	21	0.69	8th	54.97

COUNTY BOROUGH OF CARDIFF.

DEATHS FROM SPECIFIED CAUSES AT ALL AGES, AND AT SIX GROUPS OF AGES,

During the Year ending January 2nd, 1904.

Estimated Population, 172,598.

CAUSES OF DEATH.	AGE.												ALL AGES.			Rate per 1,000 living.
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	M.	F.	Total.				
ALL CAUSES.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.			
Small-pox, Vaccinated .. .. .	..	..	..	..	..	..	2	1	..	..	2	1	3	0.01
Measles	4	7	10	5	1	..	..	..	15	12	27	13	37	0.15
Scarlet Fever	1	1	9	6	6	5	1	..	2	1	19	13	32	0.18		
Typhus Fever .. .. .	..	..	..	..	..	..	1	..	..	..	1	..	1	0.00
Epidemic Influenza .. .. .	..	2	..	1	1	..	..	3	1	2	6	6	12	0.06
Whooping Cough	9	10	6	10	1	1	..	..	..	..	16	23	39	0.15
Diphtheria, Membranous Croup .. .. .	..	2	9	15	7	..	..	..	..	..	30	26	56	0.20
Enteric Fever .. .. .	..	..	..	..	2	2	2	4	4	..	8	6	14	0.08
Diarrhœa, Dysentery	29	30	3	8	..	..	1	3	2	4	39	41	80	0.46
Epidemic or Zymotic Enteritis	2	..	..	..	..	..	..	..	..	..	2	..	2	0.01
Cow-pox, Accidents of Vaccination	1	..	..	..	..	..	..	..	..	..	1	..	1	0.00
Syphilis	7	2	..	1	..	..	1	1	..	..	8	4	12	0.06
Gonorrhœa .. .. .	..	..	..	..	..	..	5	5	..	10	..	..	10	0.05
Erysipelas	2	1	..	..	..	..	2	7	1	1	5	2	7	0.04
Puerperal Fever	1	..	..	..	..	..	..	..	..	..	..	..	..	0.00
Fyæmia, Septicæmia .. .. .	..	..	..	1	..	..	..	..	1	2	1	2	3	0.01
Septic, Ulcerative or Infective Endocarditis .. .. .	..	..	..	1	..	..	1	..	..	2	2	..	2	0.01
Other Allied Diseases	2	3	..	..	1	..	1	2	..	..	4	6	10	0.05
Rheumatic Fever .. .. .	..	..	..	1	1	2	3	2	..	..	10	6	16	0.04
Rheumatism of the Heart .. .. .	..	..	..	..	..	..	..	2	..	..	..	2	2	0.01
Tuberculosis of Brain or Meninges, Acute Hydrocephalus	2	4	8	4	8	3	1	..	..	..	19	11	30	0.16
Tuberculosis of Lungs, Phthisis, Phthisis Pulmonalis	1	108	2	2	4	6	24	20	76	68	1	2	108	98	206	1.19
Tuberculosis of Intestines, Tubæ Mesentericæ	8	13	2	..	..	..	..	..	1	..	11	16	27	0.15
General Tuberculosis, Tubercular Disease of undefined position	1	4	3	4	1	4	1	5	6	..	14	16	30	0.16		
Other forms of Tuberculosis, Scrofula .. .. .	..	..	1	..	..	..	3	1	..	..	4	1	5	0.02
Scurvy .. .. .	..	..	1	..	..	..	..	..	..	..	1	1	2	0.00
Chronic Alcoholism .. .. .	..	..	..	..	..	..	1	1	..	1	1	2	0.01	
Chronic Industrial Poisoning .. .. .	..	..	..	..	..	..	..	1	..	..	1	1	2	0.00
Osteo-arthritis, Rheumatoid Arthritis	2	2	..	1	3	3	5	8	13	0.04	
Cancer .. .. .	..	..	..	..	..	1	33	40	15	14	48	55	103	0.59
Diabetes Mellitus .. .. .	..	..	..	..	..	1	10	5	1	..	11	6	17	0.09
Purpura Hemorrhagica .. .. .	..	..	..	..	1	1	..	..	..	..	2	2	4	0.01
Anæmia, Leucocythæmia	1	..	..	..	..	1	6	..	..	2	6	8	14	0.04
Lymphadenoma, Hodgkin's Disease .. .. .	..	..	1	..	..	..	1	..	1	2	1	2	3	0.01
Premature Birth	40	53	..	..	..	..	..	..	..	..	40	33	73	0.42
Debility at Birth	19	24	1	..	..	..	..	..	..	..	20	24	44	0.25
Atelactæsia	1	..	..	..	..	..	..	..	..	..	1	..	1	0.00
Congenital Defects	3	2	..	..	1	..	1	..	..	..	5	2	7	0.04
Want of Breast Milk	1	1	..	..	..	..	..	..	..	..	1	1	2	0.01
Atrophy, Debility, Mammæ	20	19	2	1	..	..	1	..	3	4	26	24	50	0.28
Destitution	6	4	..	2	..	..	..	..	..	..	6	6	12	0.06
Rickets	8	1	..	..	..	..	..	..	..	..	8	1	9	0.05
Old Age, Senile Decay .. .. .	..	..	..	..	..	..	1	3	63	59	64	62	126	0.73
Convulsions	58	36	6	5	..	..	..	..	..	..	64	41	105	0.60
Meningitis	7	9	3	10	5	5	..	1	4	1	19	26	45	0.26		
Apoplexy .. .. .	..	..	..	..	..	..	11	10	4	7	15	17	32	0.18
Softening of Brain .. .. .	..	..	..	..	..	..	3	2	7	1	6	7	13	0.04
Hemiplegia, Brain Paralysis .. .. .	..	..	..	1	..	..	4	3	4	8	9	11	20	0.11
General Paralysis of Insane .. .. .	..	..	..	..	..	..	2	1	1	..	3	1	4	0.02
Other forms of Insanity .. .. .	..	..	..	..	..	..	1	..	..	1	2	2	4	0.01
Cerebral Tumour .. .. .	..	..	..	..	..	..	1	..	..	..	2	1	3	0.01
Epilepsy .. .. .	..	..	..	1	..	..	1	3	1	2	4	6	10	0.05
Laryngismus Stridulus .. .. .	..	..	..	1	..	..	..	..	..	..	1	..	1	0.00
Locomotor Ataxy .. .. .	..	..	..	..	..	..	1	1	..	1	2	..	2	0.01
Pamphlegia, Diseases of Spinal Cord	1	..	1	2	..	..	7	2	3	1	12	5	17	0.09
Other and ill-defined Diseases of Brain or Nervous System	2	..	1	3	1	1	1	3	4	1	8	9	17	0.09		
Otitis, Otorrhœa	1	..	2	3	3	6	0.01	
Diseases of Eye, Ophthalmia	1	1	1	2	0.00	
Perioiditis	1	..	1	..	2	2	4	0.01	
Endocarditis, Valvular Disease of the Heart	1	1	5	2	5	31	15	17	8	31	34	85	0.49	
Angina Pectoris .. .. .	..	..	..	..	..	..	2	1	1	..	3	1	4	0.02
Anæurism .. .. .	..	..	..	..	..	..	..	2	..	..	2	..	2	0.01
Embolism, Thrombosis .. .. .	..	..	..	..	..	..	2	2	2	2	4	4	8	0.04
Phlebitis	1	1	..	1	..	2	0.00	
Other and ill-defined Diseases of Heart and Circulatory System	4	3	1	..	4	2	2	44	42	30	32	51	84	165	0.92	
Laryngitis .. .. .	..	..	1	1	..	..	..	..	..	..	2	..	2	0.01
Croup	1	0.00	
Other Diseases of Larynx and Tracheæ	2	1	..	..	..	..	..	..	..	..	1	2	3	0.01
Acute Bronchitis	28	28	4	9	..	1	..	6	3	..	5	38	46	84	0.48	
Chronic Bronchitis .. .. .	..	1	1	..	..	..	18	23	21	14	41	37	78	0.45
Lobar, Gonopneumonia, Acute Pleuro-Pneumonia	1	1	3	7	2	2	2	7	6	2	17	14	31	0.17		
Lobular, Catarrhal, Broncho-Pneumonia	26	19	15	12	2	1	11	6	2	4	59	46	105	0.60		
Pneumonia, form not stated	4	10	8	7	..	2	2	32	12	5	49	38	87	0.50		
Emphysema, Asthma .. .. .	..	..	..	..	..	..	6	1	..	1	6	2	8	0.04
Pleurisy .. .. .	..	2	..	..	2	..	1	2	1	..	3	5	8	0.04
Other and ill-defined Diseases of Re-piratory System .. .. .	..	..	..	..	..	..	1	1	..	..	1	1	2	0.01
Diseases of Mouth and Annæxa	1	1	1	1	2	3	5	0.01	
Diseases of Esophagus	1	1	1	2	0.00	
Ulcer of Stomach and Duodenum .. .. .	..	..	..	..	..	..	2	4	1	3	12	16	28	0.16
Other Diseases of Stomach	7	6	1	1	..	1	1	2	4	1	10	10	20	0.16
Enteritis	15	8	1	..	..	1	..	2	2	1	20	10	30	0.16
Appendicitis .. .. .	..	..	..	2	2	1	1	3	2	..	6	5	11	0.06
Obstruction of Intestine	2	2	1	..	8	3	3	2	14	7	21	0.12	
Other Diseases of Intestine	1	1	1	3	1	4	1	3	6	0.02	
Cirrhosis of Liver .. .. .	..	..	..	..	..	..	..	8	6	1	19	7	26	0.09
Other Diseases of Liver	2	2	4	..	4	4	8	8	16	0.04	
Peritonitis	1	1	2	4	..	4	4	8	8	16	0.04	
Other and ill-defined Diseases of Digestive System	4	..	..	..	1	..	2	1	..	1	7	2	9	0.05
Diseases of Lymphatic System and Ductless Glands	1	..	1	1	1	2	3	0.01	
Acute Nephritis .. .. .	..	2	1	..	1	..	..	8	1	2	13	3	16	0.09
Bright's Disease .. .. .	..	1	..	..	..	..	16	14	5	3	22	18	40	0.23
Diseases of Bladder and Prostate	6	1	2	..	8	1	9	5	14	0.05
Other and ill-defined Diseases of the Urinary System	1	2	2	1	3	4	7	0.01
Diseases of Ovaries	3	..	1	..	4	4	8	0.02	
Diseases of Uterus and Appendages	1	3	..	1	..	5	5	10	0.02	
Diseases of Vagina and External Genital Organs	4	5	5	10	0.02	
Puerperal Convulsions	1	1	1	2	0.01	
Placenta Prævia, Flooding, Accidental Hemorrhage	1	1	1	2	0.00	
Other and ill-defined Accidents and Diseases of																

Chart showing death-rate per 1,000 of the population from Zymotic Diseases during the Years 1878-1903.

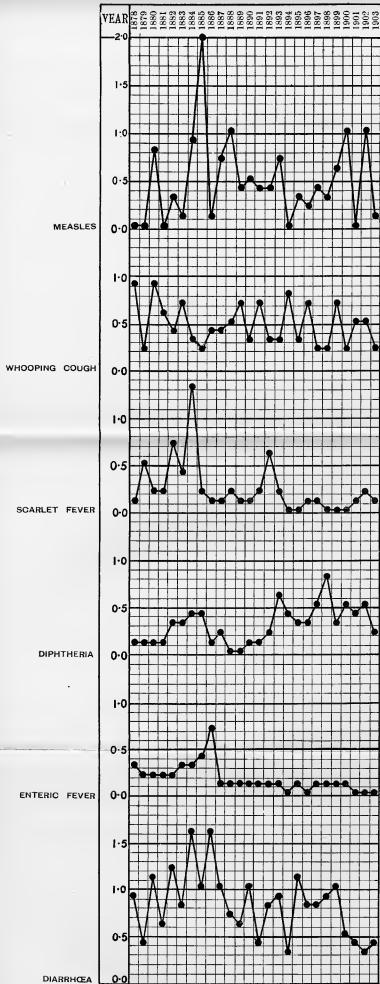
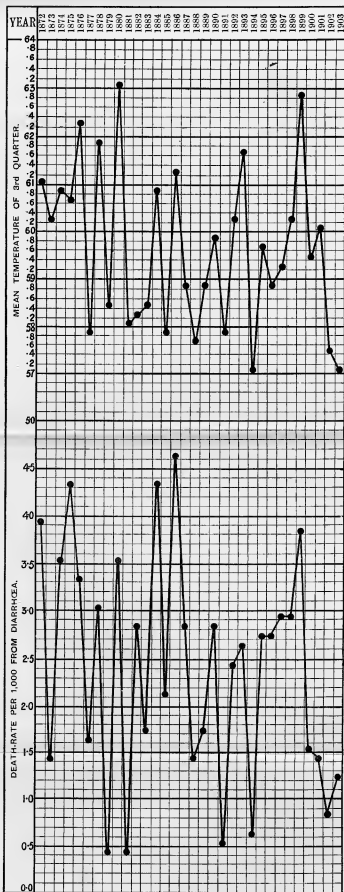
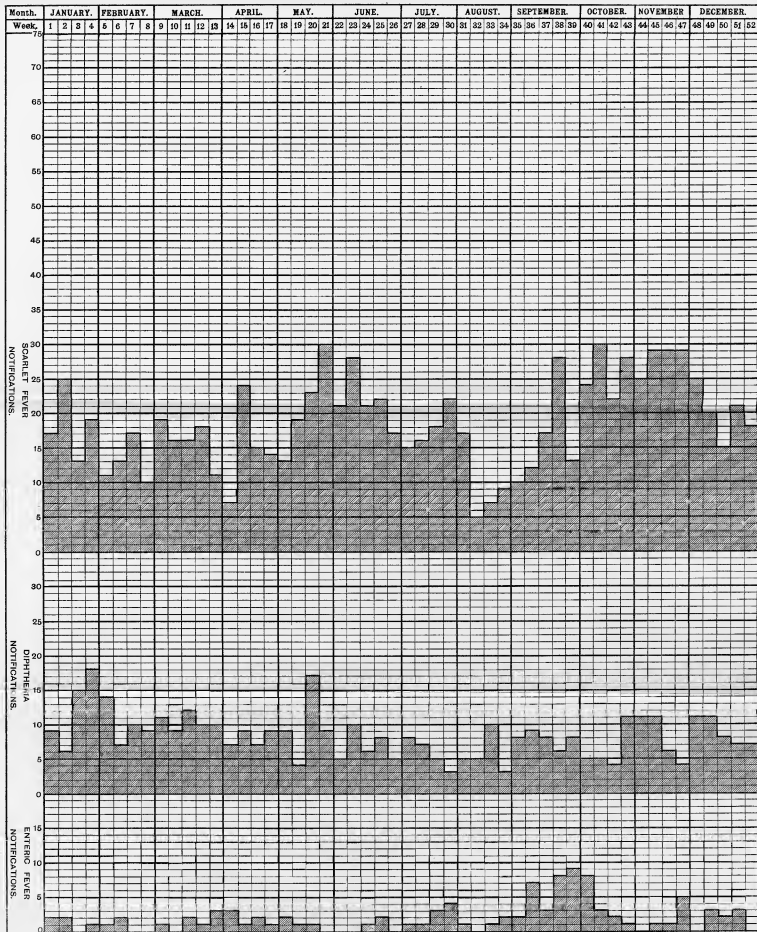


Chart showing the influence of temperature on the Diarrhoea death-rate in Cardiff, during the Summer quarters of the Years 1872-1903.



1903.

WEEKLY NOTIFICATIONS.



1903.

Deaths from all causes, and the Seven Chief Zymotic Diseases.

